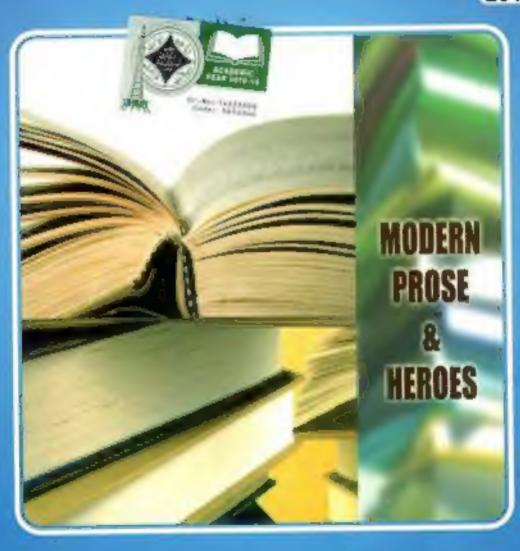
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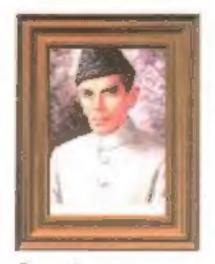
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2018-19





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"Education is a malter of life and death for Patistan. The world is progressing so rapidly that without requisite advance in education, not only shall we be left behind others but may be wiped out altogether."

Summer 2t 1941 Special

Quald-s-Azam Muhammad Ali Jima Foundar of Pakistan

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GOVERNMENT OF THE PUNJAB DENGUE FEVER AWARENESS CAMPAIGN

1. INTRODUCTION

Dengue is a mosquito-borne viral infection in human beings. In a few years' time, it has become the most rapidly spreading international public health problem, particularly in urban and semi-urban areas of tropical and sub-tropical regions of the world. More than 50 imiltion people are in connect with the disease each year. This disease had also been known as break-bone fever.

1.1 Etymology (Origin of the Name)

Name of the disease, most probably, is derived from a Swabili word "Dinga" which means "evil spirst", Swahila is spoken in many East and North African countries. "Dengue" is a Spanish word meaning careful. It might have been used because a person suffering from severe pain in bones and joints moves carefully.

- 1.2 Classification of the Disease: The disease has four types:
- 1.2.1 Undifferentiated fever; where very mild symptoms like flue, cold or negligible fever occurs.
- 1.2.2 Dengue Fever (DF): with clear symptoms of high fever, headache, severe pain in joints and rashes on skin etc.
- 1.2.3 Dengue Hemorrhagic Fever (DHF): It involves high fever with spontaneous bleeding from capillaries.
- 1.2.4 Dengue Shock Syndrome (DSS): More serious symptoms of high fever and shock, very low blood pressure, weak pulse (difficult to detect).

2. HISTORY OF DENGUE

The first reported epidemics of dangue fever occurred in 1779-1780 in Asia, Africa, and North America almost simultaneously. At that time, dengue virus and vector mosquitous had a workdwide distribution in the tropics and subtropics. Aedes aegypti was identified as a vector of dengue virus in 1905. A global pradomic of dengue began in Southeast Asia after World War II. It has intensified during the last two decades in many countries. Sri Lanka, India, and Maldive Islands had their first major DHF epidemics in 1980s.

In Pakistan, cases of dengue fever were first reported in 1994 from Karachi. Since then its victoria are increasing in different regions of the country. In 2011, situation has become alarming in Labore.

3. SYMPTOMS

Among the people infected with designe virus about 80% have only mild symptoms of uncomplicated for er. When mild and fitterm and symptoms appear without any rash, it can be misdiagnosed as for or some other viral infection. Less than 5% have severe illness which may be life threatening in a small proportion.

The common symptoms of dengue fever usually appear within 4-7 days after infection. These may include high sever chill, rush, severe headache especially behind the eyes. Dengue is named "break bone fever" due to severe muscle and joint pain. Other symptoms are directed, as gue, weakness, loss of appetite, nausea, persistent vomiting and backache. However, symptoms vary from person to person.

3.1 Phases of Symptoms

The course of exlect on is divided into three phases; februle phase, critical phase and recovery phase (Fig. 1).

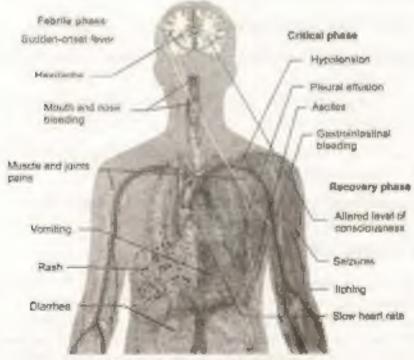


Fig1, Symptoms of dengue fever

3.1.1 Febrile Phase

It usually lasts for 2-7 days from the beginning of the illness. In this phase the temperature of the patient may rise above 102 F, with generalized pain and headnohe. Some

patients may have sore throat. It is difficult to distinguish dengue from non-dengue in early febrile phase. A positive tourniquet test increases the probability of dengue. Rash appears in 50-80 % patients, mittally as flushed skin but after 4-7 days as measles like rash. When skin is pressed capitlaries are broken, tiny red spots (petechine) appear on skin (Fig. 2). Mild bleeding may occur from nose and gums. In some patients gastro mestinal biceding also occurs. The liver often enlarges after a few days. The number of platelets and white blood cells progressively decreases. After about 2-3 days the symptons of the disease

subside, fever drops and the patient sweats profusely.



Fig 2: Petechiae on skin

3.1.2 Critical Phase

In some cases the disease moves to a critical phase. It usually lasts for 1-2 days. The temperature drops to normal on day 3-7 of illness. The permeability of capillaries increases. Fluid-plasma leaks for 24-48 hours and accumulates in the chest and abdominal cavities. Platelet level further decreases. It increases the leakage of plasma from the blood capillaries. This leads to decrease of fluid in circulation, hence decrease of blood supply to vital organs (liver, kidney, heart, brain etc.). It may cause organ dysfunction, severe bleeding, low heart rate and low blood pressure.

Dengue hemorrhagic fever (DHF) and dengue shock syndrome (DSS) occur in less than 5 % of cases. Dengue hemorrhagic fever is characterized by high fever, hendache, small' purplish spots on skin due to leakage of blood from capitlaries, abdominal puts, vemiting with blood due to bleeding in stomach. People with low immunity or with secondary infection are at greater risk of developing DHF. A small proportion of DHF cases may lead to dengue shock syndrome. DSS can damage body organs like heart and kidney due to low blood supply.

3.1.3 Recovery Phase

Recovery phase lasts for 2-3 days. During this phase reabsorption of leaked fluid into the blood stream takes place. Appetite returns, bleeding, nausea and comiting decrease, large urine output occurs; plasma level is restored, white blood cells and platelets start increasing. Fever and other symptoms rarely last for more than seven days.

3.2 Comparison with Malaria

Features	Malaria	Dengue Fever	
Mosquito	Anopholes	Aedes negypti	
Infections organism	Plasmorium	DEN varys	
Symptoms	Severe chills with goose flesh and shrvering with high fever. General headache Fever becomes normal by profuse sweating after a specific time (3-4 hours) but if not material to occurs again other no interval depending upon the life cycle of Plasmodium (usually 48 hours). No muscle and joint pain. No rash on the body No leakage of third plasma from block capiflaries.	High fever and chill. Headache especially behind the eyes. High fever which become normal after 2-7 days and no recurrence of fever. Severe muscle and joint pain. Rashes on the body. Leakage of fluid/plasma from the blood capillaries.	
Etabitat	desphere profer to five outdoors and dirty water	Ander prefer to live close to human habitat in urbut areas particularly indoors.	
Time of attack	Anopholes is mostly active at night.	Day time aggressive bites with feeding peaks of two bottes before and after down and dask.	
Primary and secondary attack	Primary infection cannot induce life long protective immunity. Secondary infection is not severe than primary infection.	Printery infection can induce life long protective immunity to the infecting seretype. Secondary infection by some other priority infection.	
Treatment	Bed rest, sponging and anti-malarial drugs	Bed rest, sponging, rehydration (more fluid make), and pyretic drug preferably Paracetumol	

CAUSATIVE AGENT

Dengue fever is exused by dengue virus (DEN)

Structure of Dengue Virus 4.1

This timy creature contains atl information for its homible mode of attack on poor patient (Fig. 3).

Secutypes of Dengue Virus 4.2

Dengue Virus (DEN) has four distinct serotypes, known as DEN-1, DEN-2. DEN-3 and DEN-4. Any of the four serotypes can cause severe and futal disease. There are some variants of each serotype, which may have greater epidemic potential.

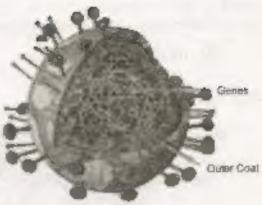


Fig. 3: Structure of dengue virus

TRANSMISSION OF DENGUE VIRUS 5.

Dengue virus is transmitted by the bite of infected female of Aedes mosquito. It ean also be transmitted by infected blood products and through organ transplant. The life cycle of the dengue virus involves mosquito as a vector and human beings as a host

Stages in Human Being 5.1

Man is the primary host and can be infected by a single bite of infected deiles. After getting entry into the human blood stream through the mosquito's salesa, the virus attacks and reproduces in various target cells, in skin, lymph nodes and liver. New viruses attack white blood cells to further increase in number. Wist's produce a number of proteins, responsible for many of the symptoms such as fever, flu and severe pains

Stages in Aedes Mosquito 5.2

Mosquitoes are important vectors of human and animal diseases. Aedes aegopti and Acides albopicities are considered as vectors of dengue virus in Paleistan. The male mosquitoes of all types feed only on plant juices while females, in addition to plant juices, may feed on blood. It needs blood proteins to produce eggs. Without blood meal it cannot lay eggs. Aeder female generally acquires the visus by feeding on the blood of an infected person. Virus replicates within its body. It then moves to the mosquito's salivary glands where it continues to replicate. Life cycle in the mosquito usually completes within 8-10 days, depending upon suitable environmental conditions, especially temperature. The virus seems to have no harmful effect on infected mosquito, which can transmit the virus to human beings during blood meal. Infected female may also transmit the varus to its next generation through her eggs.

In Pakistan three main groups of mosquitees, i.e., Aedes, Anopheles and Culex predominate. Only their females serve as vector for a number of pathogens (disease causing

organisms). Viruses of deague and yellow fever are transmitted by Aedes, malarial parasite (Plannedium) by Anopheles and filarial parasites, which cause elephanties is by Culex.

Morphology of Mosquito

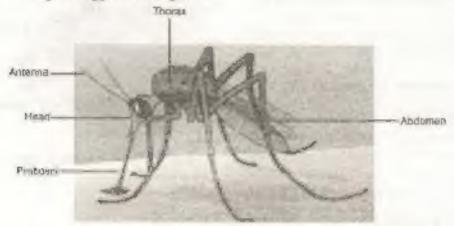


Fig. 4. General structure of a mosquito

7. LIFE CYCLE OF Aedes MOSQUITO

Water is necessary for all mossipatoes to complete their life cycle. Their development shows complete meramorphosis with four stages, e.g., larva, pops, and adult (Fig. 5). The first three stages occur in water while adult stage can fly in air freely. The life span from egg to adult takes about one to six weeks, depending upon the availability of food, optimum temperature and hamility. The most favorable temperature is 28°C with 80% humidity.

7.1 Egg

Ander mosquitoes prefer to lay eggs on rough and moist surfaces. The eggs of Andes are black in color and oval in shape (0.5 mm in length). They are shielded by a rigid shell having minute pures for gas exchange. Each female can by eggs upto 5 times in her life and the number of eggs varies from 50 to 300 eggs. Eggs of Ander remain dormant in winter and can withstand drying up to one year. They can hatch when water is available.

7.2 Larva

Exposure to high humidity at the water line for 2-3 days is required for larva to hatch from the egg. Larva has a well-developed head with mouth brushes for feeding, a large thorax, a long abdomen and has no legs. The posterior part of the abdomen has four lobed gills and a shorter air tube (s phon) used for breathing. They actively feed on bacteria and tiny organic matter found in water. After replacing its covering four times, it becomes pupa within 2-4 days.

7.3 Pupa

Pupa is motile but does not feed at all. This stage ends by shadding of pupal case and emergence of adult within 1-2 days.

7.4 Adult

The newly emerged adult rests on the surface of the water for a short time to allow itself to dry and its parts to harden. The adult mosquito usually lives for 2-4 weeks.

8. DIAGNOSIS OF DENGUE FEVER

Early diagnosis is necessary for the accurate treatment and proper management of the disease. Nearest family physician must be connected for his advice. Quacks and selfmedication should be strictly avoided.

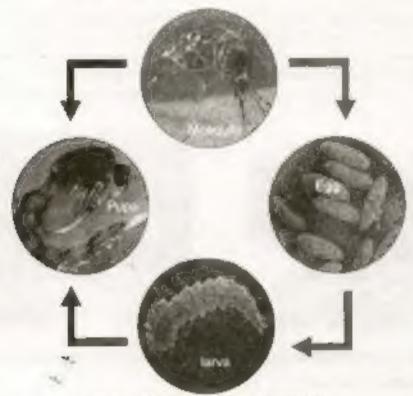


Fig. 5: Life cycle of Aedes mosquito

8.1 Laboratory Tests

Clinical tests are carried out on the advice of the physician for diagnosis of dengue fever.

8.1.1 Complete Blood Count (CBC)

It is a broad screening test for many diseases. Automated and year gives a profile of number of different types of WBCs (white blood cells), RBCs (red blood cells) and platelets per unit volume. Low WBC and platelet count may indicate detigate.

Table 1: Normal ranges of different types of blood cells

Type of ceas	Normal Runge
RED Blood Cells (RBCs)	J900000 - 5500000 / μ1
White Blood Cells (WBCs)	4000 - 10000 / pl
Platelets	150000 -450000 / pl

8.1.2 Tourniquet Test

For this test the coff of the blood pressure instrument is applied around the arm, inflated to a pressure about 105 mm Hg (man of mercury) for five minutes and then removed. Small round flat dark-red spots (petic base) may appear on the skin. These are formed by bleeding into the skin. Then may be sen or more per square inch indicates possible dengue fever. Number 20 or more confirms the Dengue Bemorrhagic Fever. (DHF)





Figure 6. Blood pressure apparatus (left) and sem showing positive tourniquet test (right)

8.1.3 Detection of Antibodies

Certain antibodies produced in the human body in response to viral infection e.g., Ig G and Ig M. These antibodies can be detected around the fifth day of dengue onset

9. MANAGEMENT STRATEGIES FOR THE DENGUE PATIENT

For the time being, no effective medicine is available for dengue fever. The World Health Organization (WHO) recommended that patient should be kept on supportive therapy.

9.1 Complete Bed Rest

Complete rest is advised by the physician. It is the most effective method for

control ing any kind of disease. Activity or anxiety uses body's energy. Patient should stay came to cope with the disease more efficiently.

9.2 Sponging

In the case of high fever, body temperature should be kept below 10,2%. Ductors advise that it may be lowered by aponging with moderately cold water.

9.3 Paracetumol

Paracetamo is the only effective drug advised to relieve fever and path. Any other drug is strictly prohibited to avoid complications. Dose should be determined by a doctor

9.4 Rehydration

Papers should me least fluid make through fruit raices and ORS. Oral Rehydration Salt. It is very important to replace loss of fluid, sugar and electrodytes. Assente fluid intake reduces the chance of hospitalizations.

9.5 Hospitalization

A a patients need not to be hospita used. They may be sem hartie by the physician after early diagraisis or mad symptoms. Most of the dengue patients can be treated as unit patients, and advises to immediately rush to hospita, in the case of emergency.

9.6 Isolation of the Patient

Complete isolation of the patient is not required however use a mandatury so has a mandature may not get virus from the patient. Hospital environment should be used free.

9.7 Avoid Travelling

The patient should not trave to long distance to avoice spread of disease to other areas

9.8 Platelet Transfusion

Plateiet transfusion is not required in most of the cases. A qualified doctor regularly monitors the piatelet count and decides the time for transfusion. Plate et transfusion from a suitable donor should be carried out under his supervision in a hospita. Proper screening and cross matching of donor and recipient is necessary. To facilitate the piatelet transfusion, government has equiped major hospitals of the towns with mega stail cell tentrators. Concentrated form of platelets separated from single donor is eas ed mega stail of platelets. These separators quickly isolate only the platelets and simultaneously return test of the blood back to the donor.

10. PREVENTION

Presently there is no specific varieties available for dengue fever. Therefore, the only charge jets and control the vector involves in the transmission of dengue varies. Control of hospita to also helps to control other diseases like tualists and reliew lever.

10.1 Protect People from Mosquito Bite

- 10.) Like Bed Nets: Bed nots should be used to protect the people from manquito bite took managed most y bites during the day and *Anaphetes* at might field nots are more that it when they are treated with an assentiate or insect repeated.
- 10.1.2. Use Viosquito Repellent. Mosquito repellent in the form of body lotions may beep avoid manage in bite. Aerosa insection des hisportaing mais and musquit include should be used process therefore may use be proved with mosquito repellents.
- 10.5.3 Wear a Proper Bress. Min most area of exposed samby wearing fall score shirts and long pants. Wearing socks and closed shoes further reduces the risk. Misquillo repetient can also be appured to couther for further protection. Avoid wearing dark and right clothes because morgano acades more on dark colours and can easily but havings a glit clothes.
- 10.1.4 Screening of Houses, Offices etc. Screening of windows and don'ts with fine wife nes bank entry of manquitoes. Dengue patient should arways be kept in screening room to avoid virus appeals from the patient.
- 10.15 Reschedule Dally Activities. People should reschedule the pattern. Only net vities of ife. We should avoid going outside during the peak nours of mosquito at 11 dy. Moreover we should avoid visiting areas of epidemics.

10.2 Vaccination

Vaccines are weak or killed germs, which when introduced in the body induce animumity against the healthy germs. Dengue vaccine is not yet available. A quadrivatent vaccine for a four dengue serotypes is still awaited.

10.3 Vector Control

10.3.1 Destruction of Breeding Sites

Active breed mainty or stagnant clean water bodies such as earthenware jats and domestic water storage tanks. But discarded plastic food containers, toys, old tyres tree boies and leaf axils that can collect rain water, gutters and drains are also potential breeding sites. Following measures should be taken to destroy these breeding sites.

Cover any water container.
 Remove any bottle playing bag, pot old pan, tan and out tyre.

Remove any water standing in laws, flower beds and pots.

Change water in vases bowls, flower pois and plates on alternate days

Close and dry all swimming poors and foundains during breeding season of mosquito

Drain out or regutarly change water from room cooler. Also drain out water coming out from air conditioners.

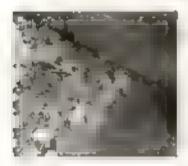




Fig. 7: Waste items and parbage which may become meaquite breeding site

Coverat manhores.

Water from perso or birds and animals should be replaced dayly

Cover water tanks on roof

Repair ad taps asto pipes from where water is leaking out

Drain water after washing motor eyele and car ele-

Change water regularly at tish aquartum.

Drainingly stagmant rain water fit these sites with sand and sor

Reprove trash from streams and drains

Clean toilet and guily trap every day

Turn over all water storage buckets and small tubs

Cieprary blockage in toof drain pipes regularly

Remove water from leaf axils and tree holes or add some insecticides

10.3.2 Control at Adult Stage

Chemical control: Adult mosquito can be falled by the use of insecticides insecticides should be used carefulty. Avoid any direct inhalation of spray or smoke insecticides should be sprayed inside buildings, perfectivity on walls, behind the curtams, under the bed and sofa. Doors should be closed for some time after the spray Fogging should be used to to the mosquitoes in open places. Unwise use of insecticides may cause health hazards and may produce resistant strains of mosquitoes.





Fig & Fum gallon and serosol sprays

I se of electric masquata killer. Defector to per et meetre, masquate killers are used. These needed electric vaporater electric mosquate tap e neede masquate calchet mosquate etc.







Fig 9 Electrical appliances for mosquito control

Biological control: It magnesis control should be adopted to avoid the harmful effects of chemicals in budge cal control to ing organisms are used to know mosquines. Spiders, by and dragon these are the natural predators of mosquito introduction of these organisms is earl marketily reduce the number of mosquitoes.

Horticulture Discipline: Regularly cut the grass and weeds where mosquitoes may hide

10.3.3 Control at Larval Stage

Chemical control: Application of farmental chemicals to the breeding sites reduces the mosquite nopulation. Spray of kerosene of on water blocks the air tube siphon of mosquite arvae and kins them, but these chemicals also desirely useful animal and plant afe to water bookes.

Biological control: a ving organ was can be used to destroy the mosquito larvae. Marty

fixites and copegods predate apon mosquite Levice. A hapternum produces toxins which kis, mosquite larvae. It can also be used for biological control.

10.3.4 Control at Egg Stage

We can destroy the eggs by using overaps. Overaps are black paistic water containers with paidles that are in contact with the surface of water. These overaps attract the female mosquite to any eggs, to these overaps either the female is anapped of eggs are known by chemicals mixed with a are movimap. Overaps should be used with care

10.4 Integrated Disease Management

10.4.1 General Public Awareness for Civic Sense

A public awareness campaign for general cleantiness should be nunched. The message for public awareness can be communicated by

Masa Media, uncludes radio 11 newspapers etc.

Educational Institutes: feachers can develop awareness in students about the cause and prevention of the disease

Mosques. Khateeh of mosque should create public awareness to mosques

House to house campaign: Small committees should be consisted compilerly structure, teachers, soons, workers and peoples from civil society to visit don't and offente nwareness about disease.

Posters and businers. Posters and businers should be displayed at prominent places in cities/towns high ighting the cause and prevention of the disease.

Seminars. Seminars and workshops should be arranged in educational institutes, public halfs and theatres to create awareness in public regarding disease. Experts should be given this link.

10.4.2 Legislation

Laws should be formulated to punish and fine the persons organizations involved in the spread of the disease. Legal action should be taken against them. Such complaints should be entertained on priority bases.

19.4.3 Collaboration among Organizations

Different organizations departments of public and private sector doing efforts for the control into prevention of the disease should work in coulaboration with each other. There should be active communication among policy makers, numigers of the programs, administrators and other key partners. An insegnated and mutudirectional disease control approach should be adopted.

11. RESEARCH

The scope of research is to develop effective methods of vector control aplique antiviral drug and development of laucine for all senton per of designe virus which is safe.

effective and affordable

12. GOVERNMENT'S RESPONSE:

Government of the Pun ab has made tremendous efforts to control this op demic. Special dengue wards are established in hospituis that are equipped with atest megaled separators for platelet separation. CBC diagnostic camps are set up at different places in the city for diagnostic of dengue, free if cost if spens from Sri Lanka, Indonesia and I will and are requested to train special teams of doctors and parations, a stiff to help combat this if sease. Fogging machines and insecticides are main to Studien's and teachers have part a pated in public awareness campaigns of inducted intrough posters and paraphlets and seminars. Monitoring teams are given the loss is suspect the level of cleanliness, public hygiene and sanctation. Regains feed back of all the efforts in control dengue are being presented to the Chief Manister on daily basis.

By the grace of A reighty Allah, out of about 7.4 m then population of 1 abore only 365 dea his are reported to November 2014. These included deaths from not miss only included on the state of the state of the state of the order of the ore

EXFRCISE

SECTION 1

O. No. 1. Select the correct answer.

- In a patient of dengue fever, fluid level in blood is generally
 - a) increased

b) Decreased

c) Stabilized

- d) Unchanged
- Mosquitoes are involved in the spread of
 - s) Mahuta

b) Deague

c) Yellow fever

d) All of these

3	Detigue vitus is spread by			
	a) Culer	h) Flies		
	c) Aedes	d) Anopheler		
4	Dengue virus increases ets mumber in			
	a) Skin cells	b) Lymph nodes		
	c) WBCs	d) All		
5	Severe chi. sh vering and recu this ossesse	uring attacks are the characteristic symptoms of		
	s) Dengue	b) Telemus		
	c) Malaria	d) Pharyngsis		
6	Paracetamol is a drug common	ly used to		
	a) K.II DENV	b) Kill mosquitoes		
	e) Relieve pem d) Kill Planno	dium		
7 These are the substances produced by our response to certain infections.		ced by our immune system in the body in		
	a) Enzymen	b) Antibiotics		
	e) Drugs	d) Antibodies		
8	Dengue disease spreads by the	foilowing process		
	a) Person to person by contact	b) Through contaminated food		
	c) By mosquitoes	d) All of these		
SECT	rro%_11			
Q: No	s. 2: Give short answers of the fe	ollowing questions.		
1	How is it possible to lower the body temperature of a patient without medicine?			
2	If it is not possible to eliminate morquitoes how can we avoid being brian?			
3	Define biological control, how this method can help control mosquitoes?			
4	Define a disease vector, give a few examples of vectors.			
45.	Why is biological control more appreciated than insectionde sprays?			
6.	Is it was to try to diagnose and treat a disease at home? Wby?			
7	University design facility has deffer	contested from malma?		

- 8 In why highest mosquite born diseases are generally restricted? Why?
- 9 Name some common diseases which can be onto fled by effective vaccination.

SECTION, 111

O. No. 3: Give cuborate answers.

What are samous possible means to check the masquito growth?

- 3 What are possible simptoms of dengue as her may occur in different patients?
- 3 How should the government respond to not epidemic?
- 4 What should be the rote of a community in case of a serious epidential?
- 5 What types of absoratory tests are belipto to accurate diagnosis of the dengue?

SECTION IV ACTIVITIES

STUDENTS VISITS AND ASSIGNMENTS.

I Visis the hospital of your area.

Observe he systems conditions of the hospital

- A sor the designe ward and observe the conditions in which he patients are kept and their way of treatment.
 - . Observe the inferent instruments instanced in the hospital such as megaseparater being used in observe management treatment.
- 2 Visit the hearth institutes and note the measures maken by them to continu the natione.
- Vosit sufferent research centers and obtain the details of research going on deogue
- 4 Yes t diagnosise laboratories and nemiests for the coagnosis of dengue fever
- 5 Make groups or 5/10 students and visit he mes of different selected areas. Note the byggenic conditions and 6 the performandes good for this purpose
- Visit the different industries and observe how do they dispose off the wantes.
- Visit sewage disposal colors and observe how these centers dispose off the wastes.
- 8 Visit different forests and find the places where mosquitoes breed and live Suggest different methods for their control

ENGLISH BOOK - II

FOR
INTERMEDIATE CLASSES





PUNJAB CURRICULUM AND TEXTBOOK BOARD, LAHORE

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A few stars are known which are hardly bigger han the earth, but most of them are so large that hundreds us to assauds of earths count be packed unade each and reave room to space, here and there we had an immerise war large energy accompanion; hous and mid-ons of earths. And the following the of stars in the armorase is probably something I we the total number of grains of same in a line seasheres of the works. Such is the infleness of our home in space when measures up against the total substantial at the universe.

These meaning it stars are wandering about in space. A few form groups which journey a company but most at them have atom. And less trave through a universe an interest that it is very very are even indeed of measure, once anywhere near to produce For the most puri-cach star makes that have not used in a more like a ship in an improvement to a send mode, in which the stars are a first the a gage stap will be seen to ver a primary estimate the globour from the indeed an indeed anywhere near it.

We believe however that some two the same in their regional to a fine event took place and hat another was wande in both or the outer appeared accome near the same Just as the win and more to se traces in the same the same have more have independent to the same as the more assessment in the same at the same at a same and the same at the same and the same at the plane at great and small process have been going toward the sun over since. They are the plane at great and small process have been going toward the sun over since. They are the plane at great and small process have been going toward the sun over since. They are the plane at great and small process have been going toward the sun over since. They are the plane at great and small process have been going toward.

The sun and the other stars we see in the act are all at emely hot far porbot in the lexistion them. So also no doubt were the pieces of the sun when they were first thrown of Gradua by they became a soler and how they have a sent in he hear of their own of their warmth coming a most entirely from the radian in which the sun pours down on how the course of the one of these cooling there a gave birth to the the do not know how when or why this happened, it started in simple organ sons whose hy his power consisted chiefly in their being able to reproduce themselves before dying. But from these humble beginnings came a stream of the which, growing ever more and home complex has in the end produced beings whose tives are rargely centred in their teelings and antibilities their sense of heauty and the religious mythich de their highest hopes and noticest desires.

Authorigh we cannot speak with any certa ore seems thost akely had he human race carries into existence in some such was as this Standing on our lit compin of sand, we try to discover the nature and purpose of the annierse which surrounds our home in space and time. Our firs, feeling is something live tear. We find the universe (rightening because of its timense distances which we do not understand, riightening because of the site ches of time so great that we cannot imagine them making the whole of human history so very small in comparison implicesing because of our extreme lone mess, and because of the inteness of our home in space in this copy part in a plant of sand out of an the sea-sund in the world. But above at the see we had the impress the breaking because we cannot brigging a gar hat the sixe our ownexasts anywhere in a except on the earth indeed, for the most part, empty space is so countries at the notice additional to high if he matter in space was borsasto make the initial impossible a felioes not see the take an ipan in the plan of he universe while i produced our planetary system is a course of the share there can be only left on specifical and any space of an army square see to it he said we know on earth can be strong on panets the courts I needs to take provide a contract as appearance the most important of what are inpotable a white a surrection of an arigo distance

they are themselves are as a few order. We may from of them as a collection of bres somered brough space precise a way the sale outlooks where he content it is a most some anit degrees above above above that as, about 484 degrees of frost on the tubrenness some from the minerale structures and beyond the Milks Way this are not still Away from the fires there is this are not make ended of businesses of segrees of frost conservations there is a comparison of degrees as which all souds me in high ids built

Life can exist on a mark whell surrounding each of these files at a certain distance where the temperature incurrence hot non-toneous flutside hese reliable would be forzen inside it was able hurrit up. A rough cauculation shows that a such important helps within which it is possible a ladded ageother make undestitution housand mid-tun thriumth part of the whole compact. And even inside hem, if a most be very rare for it is extremely agustual for sums to throw off planets as our sum has appear to build only one sum in 00.000 has a planet going round to the right distance for the bepassible on it.

NOTES

Words Explained:

pack

put into box, parcel etc. put things into box, etc. get or become enished into small space. I must pack this strates foll with articles before the taxy comes to take me to the station.

spare -

do without let another have give what is not needed. She told the tobber to take her money but to spare (not to take) her tife. Can you

Emplish 12	3		
	spare the beggar a rupee? We have a spare bed for visitors. Have you a spare shift to lend me?		
average	number got by the addition of separation inhibers and division of his by a number of such numbers, what is normal or representative. His work is about average, or below or above average.		
race,	seldom, not often		
radiation	going out rack of aght or heat costung our as racs in all directions from middle point.		
organism	Is ng body having parts dependent upon one another		
reproduce	increasing number of one's sort by having offspring		
complex?	not simple, hard to get clear or straight complex machiners, complex sentence		
planetary	tiplanets planet a star rule na routed the sun		
space	that it which all provides things have his being A space or hundred a on We should have enough space between the notices in open space.		
culculation	Some any worked not by madhematics, decision as to effect event, by businessing to on the a colemating machine a rough calculation		
Milky Way	the party the showing count of stars and behavior stretching series the right sky		

ANSWER THESE QUESTIONS

Flow is a that a sear seidom finds anothe estandor it?

- Whe happened when according to 5m James Jeans, a weadering star wandering through space, came near the sun?
- 3 What happened when the wandering star came nearer and nearer.
- 4 What are planets and how did they come into existence?
- 5 Why is there no life on the stars?
- 6 Write a note on the beginning of life on the earth
- 7 Why is the universe of which our earth is a part, so trightening? Give as many reasons as you can.
- 8 What, in your opinion, should be the conditions necessary, for the kind of afe we know a existion other heaven's bodies? Do such and hons generally exist?



USING THE SCIENTIFIC METHOD

Darrer Barnard & Lon Edwards

All of as have benefited great train the use of clean the method monthing problems such as those dealing with the main enance of health, the product of any preservation of foods, the construction of our houses, and the improvement in communication and transportation. Notion a have our ways of the changes that people themse was have also been changed. Today we are better about each any happenings which used to be considered strange and mysterious. Ashough there is so I have the improvement, we are now generally less fearth, than our tarbers and grain to them were. We are a so more official in our damping than our appealors.

This lesson should bely seen abservable how he use at scientify method has improved a ving conditions and claims, people 1 in a tida so help volunderstand how you can make better use the scientific of a constant him.

Better Control of Disease

had open born two hundred years ago, you would have had about one chance heighting by the one can be in their words in those days about seven our. If who better a color of which color is not that is the day Suppose you had been an about strong the term and back in a post and by the time you reached the age of welve you would undoubted have had meaners a shooping cough scar et fever and cuphthersa Eventher your batter for it was not an eight who got maken to the page of the properties and even and constitute for it was not an eight who got and who had a constitute for it was not an eight who and indeed for anyte had an earthing. A person who had to be part that there is a short in time ago. Today bab estare both in hospitals where here is it is an about of hear getting a disease. Young people are treated to protect them aga not smaller a hundred their getting a disease. Young people are are seeded to protect them aga not smaller a hundred their getting a disease. Young people are are seeded to protect them aga not smaller a hundred and spin and lever. These up a person can expect to live to be a most seventy years. I hundred a single have been made possible by use of the scientific method to your such problems as the causes. If it sease and its prevention.

Better Saultary Conditions, it is dishipal to an agrice what sanatary conditions in some of our larger of less were like only our hundred years ago. Into the narrow unpayed, and poorly drained city streets heavilhold garbage and other refuse were thrown. Animals wandered through the streets feeding upon the galbage. Outdoor to less were common, many of them satuated where human has es as near sole well's from which people obtained drinking water.

Today oursity streets are paved and we drain id and they are cleaned regularly. It is against the taw to hrow garbage in the streets. So vage from all sections of a city is carried

through senied pipes to disposal plants. Through the use of the scientific method i has been demonstrated that ansanitary conditions cause the spread of diseases, like typhoid fever choicing and dysentery. Today most any governments, layer departments of sanitation which keep the attention and thereby preven the spread of certain diseases.

منين^{ي و} بر ما در ما شورو

A certary ago it was common practice in many cities to bring water by the bucket/of for household use. Water had to be carried a considerable distance from the well to the home. It was, therefore, used very sparing vitor bailing and cleaning purposes. Often it came from sources that contained disease—producing germs.

Towns and cities today have water systems that usually provide water enough for household use. One of the most important problems in the growth of cities has been to provide soffic entiwater to meet the many needs of an increasing population. Os Angeles has so yed the problem by bringing water to the city from the Contrado River. 544 is lumetres away. Carried through a pipeline of aquedict a thousand of 1 in tres of water are delivered to the district data. In a 18 a remarkable advance from the bucket system of supplying homes with water.

More Food and Better Food. Changes have taken place too, in our coting tiablis. Through the use of science we have learned that it is heal that it car many kinds of food, and we have segmed how to provide ourselves with a variety of foods throughout the year deople who lived a century ago probably emposed cating as much as we do exide but they claim not have as many different kinds of food. Most of her foods had to be promised on their own farms or in their own gardens. Since fresh vegetables come be obtained only during the growing season, people I ving in coid climates had none during the wimer months. Therefore housewives preserved their home grown vegetables and fruits by canning picking, or any ng them for use during the cold weather. Meals were preserved by saiting and drying or by freezing when the weather was cold enough. Seafoods were generally available only along the coast, fish and she fish could be eaten soon after they were caught.

Regardless of where people tive today, they can obtain some fresh fruits, meats and vegetables throughout the year. By the quick-freeze method vegetables, fruits seafonds, and meats of various kinds can be preserved so that they are both nativious and enjoyable. Modern methods of selecting, grading, and processing foods have removed the risk or danger of poisoning from canned foods dehydration, or the temoval of water from such foods as much eggs, potatoes and applies has proved a practice, method of preservation.

Our eating habits are not the only things in our lives changed by the use of so ence. Because we have used science to learn more about the processes and materials in our surroundings and about the methods of controlling them, we have been able to improve our ways of building houses, our methods of communication and trunsportation, and even the way we spend our lessure time.

Better Attitudes. By an attitude we mean the way we feel toward some idea or some

event If a person he teves that wearing some kind of charm will prevent turn from having tail ack he will wear the charm and will feel ancomfortable without. Heelings which the clears such as this are caused superstations. Superstations people be evel a signs of a minimum ack and their tives are greatly influenced by such vigns.

Superstricts beliefs are being overcome by using the scientific method to see it is not than here single sund basis for them hew people today be severified diseases are closed to ever spinits. Though astrology and impanente line are still processed, her on not till or with a second as its in people as they are ed. It has been can ed that there is a ways a given that reason to everything that happens to people. As a result, most people income, cut black casts, broken mirrors, and the man ben. I

is the select the method it has been demonstrated that rocks are not accessarily that because his slave been be revea for a long time literal mast now he supported by the sim of the acceptable to the scientist artic people want use the select of method.

to discoveries of scientists have be ped people develop up a triage of opentonic less first are more welling proof for new fruits than to passe a thin whether been considered rise with a ways be true. Because people have mad to change their sid ideas as a time is a self-cries made by scient sis, they are less like a to accept on reasoning as three.

NOTES ___

Words Explained.

maintenance; keep going in good condition. The trapper anothered a speed of SC

notes per hour. She has to maintain a large fance y

communication according to the fourth with act of imparting news or giving

oformation communication between these work ages to solve

transportation act taking persons goods from incipiace another

prevention prevent a to keep things from aking place of persons firs a doing

soultary clean, healthy

dra n waterway for taking off water

garbage food etc., put out as waste

refuse waste material

nutritor toilet easing oneself in the open

human waste waste materia sent out by human bodies

sewage matter conveyed in sewers

nutritious with high food value

ose sparingly commomically with great care as little as possible

delivered: supplied. The postman delivers our letters at 8 a.m.

thrifty careful in the use of money and goods

housewife: woman controlling household, woman keeping bouse

canning: getting food tinned

ptckling . Account meat good by sait and vinegar

grading putting in order, in grade

processing putting goods through some process, or way of making

lelsure: time free from work

charm: words, acts or things credited with strange powers

rign t omen

patrology . Observation of the stars in the belief that their motion has an effect

on man's life

open-mindedness will regress to accept new ideas, a liberal nations,

ANSWER THESE QUESTIONS

- How has the scient fic method heiped us an our fight against disease?
- Write a date on the better sandary conditions available in our order adds and compare their with what they were like a hundred years ago.
- 3 What are the samuary conditions like in our villages today and how would you improve them?
- 4 How has the scientific method hesped us in the production and preservation of foods?
- 5 We are now generally less fearful than our ancestors. What were our uncestors afraid of?
- 6 How has the scientific method enabled as to get over the old fears?
- 7 What part did astrology play in the lives of men and women in the past? Give examples.
- B Describe some of the superstations striceurrent in our country. How do they affect the tyes of those who believe in them?



Herbert E. Howkes

The first who do not each the rinatura academic boundary during the course of he first lege career but who have at colors who as not a to make possitioned as have he not verified with the deal of the state of the means to make possitioned and really have he not verified with the deal of the hard who have a small opened to book but before sometime on the asks as a great there is the bit who as to will assist opened to book but before sometime on his work and a linear appeals. The character has the penels because any or needs it bad y. And who he has a appeals the character has the penels where sharper ing. And so on, until his me against and the real of the sharper has been been to be the first and and, so the deal of the sharper has the state of the sharper and care the sharper of the bit of the sharper book hap many a hop of equal ability who does good work.

A common course of the sea one seconomic countries in the boy on the part of big parents have then there I show a so shill have a may only a much a tig may interest in his work at dwine some try by two sit a drame of a net on, because it will award a direction. mapped on the his parents that runs of an article. It is nigrests and its it have made it mup her if yers warm enemies among the patents of conege students by telling here that I while that the gime of a never it ended here son to be a physician, if a demist of an enginer to the beautiful be a second to any me in test though but he long s he for all was so be the wants to be a thenford manager or a boot short has ess as in the first of the measurement for he box to turn his hack on a fine opening is be ferral per existing a hospites But reason cannot control a lof hese matters. As we a gues with a person has be ought to ske imons when he detests them. As a general in ag the hos arms and in such contravers and he should. Also, be it said, the poren whom, have. Hender about the sines appund after a term of years and tell sine that his son was right and that he is thanking or me for taking the part of the boy in the argument. If such aboy 6 s should be cannot being himself to the lade the work that is a stasteful to him and has he fee's kleading him in the wrong direction. If the co-ege is alive to its work of autice such assessme caugh the are he far are is a priplete

Another is pearl hos who open not an is the very bright box who has always done his school work without effort and who has never learned what real approachion is. He supposes that he can thost through conlege with as instellection as ne did through school. I sometimes think that he bright box who has always depended on his ability to get things quick will the most pitable object among all out fating suidents. Fire its almost a tragedy to see all of this

keenness going to waste and to fee that the entire opportunity which the college has it offer is passed up because of a too recept, we mind. The cure for this some thing is again not easy, for it involves an entire change of attitude and the forming of a completely new serior habits. No one can do this but the boy himsent. All that the result has an disk to point our what is the maner.

The question of hearth, both physical and menta, is a ways one of the reasons for finding. If an udequate health service is available in the college, and if proper cooperation exists between the teaching staff and the office of the college doct of an animense number of factures can be avoided, and, what is must as disportant, he release in make a to acsettafactory college work can be clearly understood by the best his parents and the at lege authorities. In the case of poor academic work, the reason for which is not apparent it is my custom gaways to ask the student to andergo a thorough processing experient of the surprising to find our in how large a percentage of such cases the animers of plays claim add an adequate reason for the difficulty. Tuberculosis, bad founds, sleeping ancieness, pool digescon, various forms of mental and nervous deficulty have been brough to tight to the distancement for past few months, to the unspeakable relief of the student and only literation of the aculty Occasionally one meets an out-fashioned person, is, the tashet who is, the natework muths ago that, although we had arranged to have his some a openis remained without expense life would not consent to the operation. He asserted that A lab put those ieros is in his sort a throbe for some good purpose, and that he would not stand for the r remova. Since the boy was ghyorbing indimuch poison to permit proper application to hear, if ego work, we had a lask him to go home. Of course, such cases are raile, but a so recessary of cours, and a not and the symple fact that there is no substitute for health, and but, he we've my but have not buy kin w. it a not of much value union he possesses the physical viging to bring it to bear of the world's problems

Nowadays, when most ambitious be saw and orgonocollege, the binancial pressort is a very senous one. A few parents take the position, has the box show of entries way himself conege for the good of his soul. As a matter of tact, no be a highlite be compared to earn his entire way through conege for can in any way be avoided. Not only does be get a nightly poor. I ving by the process, but a mightly poor education as well. If he have might to go not make good use of reasonable contribution from the parents to bring him into the world. They are responsible to his son. The box and not ask his parents to bring him into the world. They are responsible for his being here, and consequently they have the responsibility for giving him the best equipment possible to meet the world's problems.

Nevertheless, many boys are east entire vion their own restairces for their college expenses. And it is always to the determination their health or the value of their education, or both. Any boy can earn a part of his expenses without hurting hurse. and it my experience many boys are willing to earn more than their share in index in save the burden of their

parents But to see boys by the dozen take jobs lasting from six o clock in the evening. I two in the morning six days in week to see boys undergoing transfusion of blood to get money for their food and books. Is a heartrending spectacle. Many of our boys of lines, character and excetion, ability are doing just dosk and of thing. And they take it is an important reason for apparent to: are. Most cotteges do aid they can with scholarship funds to alleviate this a that time, but even when everything possible is done every dean who knows his studen sign recall many cases of boys who have been obtiged to drop our for the lack of a infle maney to see them through.

There are always a goodly number of undergraduates whose heads are turned and whose judgement is perverted by the attract veness of athletic sports and literary in ou. ed) activity. All of these teatures is fundaged to have their place, and should receive the support of those students who are interested in them, his respective the awakening of literary adjustment as to what the contegers for is not as difficult as is often supposed of a boy is not much in created in these side shows he ought is perforted with his main tent and because professional the most of them ready are not and it reasoned with by a briefind with knows youth and understands the importance of the conteger importance is they will not always heavist to be swept. If their feet by athletics in the following has been or thing to as seen as a meason for far are as discome of the critics of our endages who see tungs to the obtained and at a long range.

A few azy bluffers drift into college and issually if Bloom spins. Most there have not found any ser has interest in the and some of them sever at 1 to a usually wise. Let hem set set the consist of presence and and suffix experience now much demand here a for a lazy bluffer. Somethes they learn their lesson and return to go histories work. But the biotechnological proof is a ways on them to show that they mean business.

On the whole, the problem that the codege dean faces calls for about the same diagnostic about the physicians. He is he ping the sixing men under by a to see life stend, viand see it whose If he can save be visitive farture through two ishness is ekness a to sin, he is doing his part of the job.

NOTES.

Words Explained

do not boundary do not complete their education. far to get the required

degree, etc

get through : pass

native ability ' natural ability

concentrate... assigned give full attention to the given work

eradicate root out, put an end to

take collar deats farmly with himself

poise... fidgets . basance and so f-discipline which keep back nervous

excitement

mapped out : planned run-counter to : go against

long and short of it : a 1 that can or need be said

opening position which business is offering

detest. have great hate for

win out t succeed

controversy . argument especially of public sort as in a newspaper

offend: displease

himself to try does not real inclined to try

alive to: conscious of application: to apply

float through college pass, get through forenness . strong desire

passes up not used, not with zed

receptive . able or quick to receive ideas

attitude point of view was of looking at something

adequate: enough, satisfactory

health service medical aid apparent clearly toes enlightenment: knowledge

substitute: person or thing taking the place of another

to bring it to bear . apply

earn his way earn to pay for his education

mighty: very large and strong detriment damage, loss, injury

transfusion of blood: putting blood from one living body into

another

heartrending very painful

Inevitably : bound to happen, as a matter of course, necessarily

see them through chable them to firmsh their course

heads are turned feel very vain

perverted get turned to a wrong use

side shows games me which are not a real part of college education

professional doing a thing for a living

swept off their feet allow them a les to be carried away

see things at a long range from a distance

bluffer one who bluffs to decerve others

dr fi go nymlessty

cold world hard answerpathese world

burden of proof obligation to prove a given statement

see it where see a to make anced we and trained laides

NAMER THESE QUESTIONS

Accord to a recommendate are some bent who is a because her do not my Whe are they? Can we help them?

- Leading to the second part of search real pages search the fit are of the boys?
- the same a second to the second at section about a respective time that the completion of the completi
- I whose property are the control to be assured in the essent.
 It wouldn't are a great to start against
- 5. It whateven does be pass in thealth lead to fail me after age? I my for can the college out for design heir species. I when a tell and each passes.
- to What place whilely a new me separtemental of leggs
- here are some some who we confere of a he for of a Should have be a sowed to stay?

.



END OF TERM

Dayld Daiches

I believe a school remoet or he a book some years ago with it of Friday Thank God". That phrase expresses perfectly to addition to be arrived of the weekend during comtime when I was a school buy. The day's great couches, with a abundant homes ark its fierce competition, the sense of never being able time as pressed feath upon me in spite of the fact that I often emoved be action to assert with which we may be a moreone of the knowledge that one samply had to get out of bed, that is was in pass to you from highwerfor an extra doze and seeing the hours of school state. I wread was a fisher expensence. expectativina Manday We had a maid once who also the action of the section apite hearry floor where, one and optimione bid in a six undangerise receptanical ones along the Salatan and an activities that an inneres treate on the uncertrettee after a draw and any feet that a section in time at the conlike in the appearance of the arms of the remember ever he by expected an appear on the species of weight of the knowledges a to also she below the new time the new times and the country of the period and assupply a course of the third observed and and the first of which is not number cases objectivated by the total distribution complete now less a sende account to save spanial no distance parties e the week a rene, song ahead. From morning was post or a lost colonies and asperiod" us each id agricessors was collection a bridge who ever the subject thou is special pappy flavour of he end of the week and one waiked home it or school in a famous afternoon howe comuch homework had because good torthe Monday is there is a of an escaped prisoner finds in this with a sold was before some again was the birth. the week. Saturday man with a lawbox to make on and M inday was placetar in Gotte of Recent way Supuly in a wast to be boar of Monday more ag-

Sometimes there were in special estimate a half he day to be a second and a more which which since also peed in a continues to a second to be cancelled the process of some anexpected ensistence of the first in the second and a second to the cancelled the process of some anexpected ensistence obtains in the second and a second to the cancelled the first and a Monday of which a made a Amoust into a new weekendo but the emedia go instead tast as ordinary weekendo, and occasionative in a merit there had been a continuous hare frost for some days we upon a get a which days skaling houseasy. These were blessed by an including the new results and a comparable of the measure weight at Christmas and a Faster day a weekendo.

the hondays were the summer holidays, the wo months vacation we got at the summer time, and it was these months towards which the whole year moved

Two months seemed a tong, long time in those days, indeed, , used to have the feeling that, for all province purposes, could took privard to period of permanent felterty. I would walk home across the bleadows in the July sunstrine, wearing my summer school cluthes of grey cricket shirt, grey shorts, and red Weison's blazer, as a savour my happ ness with conscious reliability that the event of the strenger such on terms had indeed to led away and the longed for dreamed of almost (it seemed at lines) mythical summer he idays were at hand, unsport, as yet, by my intact and promising last ahead. I all seemed for good to be true. Wishes duent come true in the life. I knew that all my early chudhood I water desperate in for a trickele with they parents you direver afford, and laier the wish was ransferred to a big cle and there too I was permanent a disappear ed all brough my first hieracle for mose f when I was twenty one with prize money and won at 6 high University. The silver in a stood outside sweet shops as hiempty pockets long, by or a penny or two to resternance suggestion or hung on the quasients of a crowd around drivecream harrow windering whether the ice-cream man would be maraconnisty inspired.) offer me a correct or a shader free. These haves never happened (The tew penue a week put ket maney we received was to be put not a money buy and suved and during our early Idhnod Lionel, hy ma and inever had anothing to spend or ourse ness. Yet summer and the summer he idays did come the school year did come to an end, and one did find oneself. at last surroung by the trums and authorses ourside No 6. Miller held Place, waiting for the tate (graphetis vehicle) that was to convey the family and its fuggage to the railway station.

NOTES

Words Explained:

weekend . Saturday and Sunday sometimes Enday and Monday

bardwork. erind :

relate e rest from work.

deze : sleep

dlamal: sad, without comfort.

erim : bard, cruel

function gloomy disma., dark

ominous being or giving bad omen

becald: proclaim the approach of

damnation . condemnation to hell

anticipation: know realize before hand

and providing the first party of an include sufficient

Coolish 12

sensation: being conscious of some effect on one's body, feeling

rose-coloured: beautiful, pleasing

flavour: quality of taste mixed with smell, special quality

which they also make the

respite time of rest

crisis: time of great danger

routine regular fixed order of doing things

felicity intense happiness

savour: special taste or smell of something, suggestion of some quality

reliab: the special taste or quality of something pleasing

efrequous: using, needing great force, hardworking

mythical without existence in fact

materialize: take form or shape

nutskirts : outer edge

miraculously . In a strange unexpected way

laspire: put thought or feeling into a person

ANSWER THESE QUESTIONS

What was the Datches attitude towards the weekend as a school boy? Why did he long for it?

- What was his general view of school life?
- 3 He liked houdays for their freedom freedom from what?
- 4 Flow did he spend his summer holidays?
- Wishes don't come true in this life, writes Datches. What are the things he longed for but could not have?
- What did be do with his pocket money?

........

It says in the paper that over two mid-in volumes have been presented to the troops by the public. It would be discressing to inspect them. Most of them no doubt are quite ordinary and suitable, but it was public visited the such as magazines twenty years lid guides to the Lake 12 strict, and back numbers of Whitaker's A manacian some cases, one imagines, such and gestibles get noto the parce siby accident but it is like vidual there are those who number the appointments of getting indicat books they don't want. Why have they kept them if they don't want them. But most people especially non-back, shippople are very to actan to throw as anything that looks tike a book. In the most interact bouses that one knows every worth exists among that looks they are so a she it and stays there in reality it is not more visible and to keep rubbish merely because it is primited it is positively a public duty to destroy it. Dos ruses in not merely makes more room for new books but gaves one is held the trouble of sorting in the rubbish or storying.

But they certainly die hard and it is sometimes difficult to find a scuffold for them. This difficulty once brought me almost within the shadow of the Rope. I was bying in a sing in the Shakespeare would say I heaven k soing flat in Che sea, and books of interior is nor verse gradou, viaccumulated there until at last I was faced with a tempore if either existing the books or a selical ing them in sole and strahed tenantive and taking footner a sewhere for myse if Now in one would have bought these books. Therefore had to throw here away or wise them off the map altogether. But how I There were scores of them. I had no a chen range and constraint them on the gas-cooker or consume them earlby leaf in my small touch fire. For it is a most as hoperess to try to burn a book without opening it as to try to burn a piece of grante. So in the end I determined to do to them what so many people do if the kittens, the them up and consign them to the river is improvised a sack is affect the books into to put it over my shoulder and went down the stairs more be darkness.

It was nearly in anight as I stepped into the street. There was a cold up in the air the sky was full of stars, and the greenish-veilow lamps threw long gleams across the smooth, hard road. Few people were about, and here and there rang out the steps of solitary travelers on the way home across the bridge to Batteriea. I turned up my overcost collar settled my sack comfortably across my shoulders, and strode off towards the little square glow of the coffee-stall. Thich marked the near end of the bridge, whose sweeping non gorders were last visible against the dark sky behind. A few doors down I passed a policeman who was flashing has lantern up the catches of basement windows. He turned. I fancied be coked suspicious, and I trembled slightly. The thought occurred to me. Perhaps he suspects I have swag in this

sack. I was not seriously disturbed as likewithat I could bear investigation, and that nobody would be suspected of having stoten such goods (though they were as that ou hours as I was carry up. Nevertheless I could not help the sught amease which comes to a I who are eved suspiciously by the police and to all who are detected in any deliberately furtive act, however hampless. He acquitted me, apparently and with a step that making an effort. I prevented from growing more rapid, I walked on anti- I reached the Einhankment.

It was then that at the implications of my act revested themselves. It canco against the parapet and looked down into the fainth furnious swirts of the river buddenly I heard a step near the quite automatically a sprang back from the wall and began walls ago or with, fervently hoped, an air of minimation and unconcern. The pedestrian came by me without tooking at me. It was a tramp who had sther things to think about and calling myself an ass. I stopped again. Now for it, "I thought but just as I was preparing to cast my brooks upon the waters I heard another step. In show and measured one. The next thought came like a blaze of terrible bue lightening across my brain. "What about the splash." A map leaning at midnight over the Embankment wall, a sudden fing of his arms, a great splush in the water bursely and not without reason, whoever was within sight and hearing cand there always a seemed to be some one tiest would at once mah at me and seare me. In a I probabil, by they would think it was a baby. What on earth would be the good of te ling a London constable that had come out into the cold and come down more to the river to get rid of a pack of poetry? I could amost hear his groff sneering laugh. "You tell that to the Marines, my son."

So far I do not know how long I strayed up and down, increasingly fearfly of being watched, sustimoring up my courage to take the plunge and quaring from it at the task moment. A task I did it In the middle of Chelsea Hindge there are protecting a replan buys with seats in them, In my agony of decision I left the Embankment and hastened sentight for the first of these When I reached it anelt on the sent. Looking over I heretated again, But I had reached the turning-point. "What I thought savage is "under the resolute mask that you show your friends is there ready a shrinking and contemptible coward." If you fall now you must never helid your head up again. Anyhow what I you are hanged for it? Good God, you worm, better men than you have gone to the gallows. "With the courage of despair I took is heave. The suck dropped sheer. A vast spuish. Then silence fell again. No one came, turned home, and as I walked I thought a little saddy of at those books falling into the cold torrent, settling slowly down through the pitchy dark, and subsiding at last on the ooze of the bottom, there to be forliorized forgotten whilst the unconscious world of men went on.

Hombie bad books, poor innocess books, you are lying there still covered, perhaps with mud by this time, with only a straying of your sacking sticking out of the same into the opaque brown tides. Odes to Diana, Sonnets to Ethei, Dramas on the Love of Lancelot, Stanzas on a First Gampse of Venice, you are there in a living death, and your fate is perhaps worse than you deserved.

NOTES

Words Explained:

Whitnker's

Almonac t is a compendium of general information regarding the

government, finance population and commerce of the world, with special reference to the British Empire and the United States, besides

being an almanac in the ordinary sense. Almanac is a calendar

Indigestibles :

books that cannot be easily digested; duli, hard to understand

reluctant :

mwilling

sort out

put into different groups according to 626, quanty

shadow of the rope fea. of being hanged

evict

expe from house etc. by legal process

accumulate

get together by additions

kitchen range :

fireplace for conking

consume them:

destroy as by fire

granite:

hard grey stone

consign :

give up to

cold alp in the air ; feeling of cold

FWHE:

giplen goods

Investigation t

inquery

fortive :

secret, not open

swich .

circling motion of water air etc.

nutomatically :

unconsciously

rumination:

absorbed in thought

ипсопедии :

easy in mend

pedestriun :

going on foot, a person walking

tremp

person who goes from place to place and does no regular work

measured step .

slow regular steps

gruff. sneering

laugh

rough, unpleasing in vince, sneering laugh, smile ankindly

tell that to the marines . a phrase that expresses disbelief and natcule

strayed :

wandered

gailleap

being cowed, afraid

agony great pam of mind or body

resošute mask

coward make a show of being brave but are a coward at heart

heave lifting something heavy

noze wet, liquid mud

forlorn: unhappy, uncared for

Mime: mad

opaque not letting light through

ANSWER THESE QUESTIONS

- What work of books were presented by the British public to soldiers?
- Weas it interest of soldiers that prompted their action, or was it the wish in get the clusteress books?
- Why should have books be destroyed?
- 4 Why is a difficult to destroy books?
- 5 Why courd not the author burn the unwanted books?
- 6 How did he decide to get rid of them?
- 7 Describe the author's midnight venture to throw the books in the river and the suspicions which his action were likely to arouse
- 8 How dathe muster up courage at last to flung them into the river?
- 9 Phase come to have a feeling for those books once he had got rid of them?

THE MAN WHO WAS A HOSPITAL

It was my liver that was out of order 1 knew it was my ever that was out of order, because I had just been reading pasent inver-pit circular in which were detailed the various symptoms by which a man could be when his ever was out of order it had dietard.

It is a most extraordinary thing but I never read a patent medicine advertisement without he ng impeded to the conclusion that I am suffering from the particular disease there is dealt with in its most virtuent form. The diagnosis seems in every case to correspond exactly with all the sensations that, have ever felt.

I remember going to the British Museum one day to read up the treatment for some slight to ment of which had a touch has fever I fancy it was I got down the hook, and read a II came to read another, in an anthriting moment, I div turned the leaves, and began to indirectly study diseases generally a forget which was the first distemper a plunged prosonne fearful devastating scourge. I know and, before I had glanced half down he list of "premonitary symptoms at was borne in upon me that thad tarriy go it.

I sat for a white frozen with horror and then, to the list essness of despate I again turned over the pages. I came to typhoid fever tread the symptoms. Inscrivered that I had typhoid lever must have had it for months without knowing it wondered what else I had got furned up 5t. Vitus a Dance found, as I expected, that I had that not began to get interested in my case, and determined to s. It is the bottom, and so started alphabetically read up again and learnt that I was sickening for it, and that the scale stage would commence in about strather forth ght. Bright's disease. I was renewed to find, I had only in a modified form and so far as that was concerned. I might live for years. Choicin I had with severe complications, and dipitheria I seemed to have been born with I pledded conscient outly through the wenty six letters, and the only malady I could conclude. I had not got, was housemaid's knee.

I fe * rather burt about this at first int seemed somehow to be a sort of s. ght. Why hadn't I got housemand's knee? Why this mindious reservation? After a white, however less grasping feeling prevailed. I reflected that I had every other known manady in the pharmacology, and I graw less selfish and determined to do without housemand's knee. Gout, in its most material grant stage, it would appear had seized me without my being aware of it and zymosis. had evidently been suffering with from boyhood. There were no more diseases after zymosis, so I concluded there was nothing else the matter with me.

I say and pondered. I thought what an interesting case it must be from a medical point of view, what an acquisition I should be to a class. Students would have no need to "walk the hospitals," if they had me. I was a hospital in myself. All they need to do would be to walk

toung me and, after that, take their diploma.

Then, wondered how long I had to tive I fried to examine myse I I felt my pulse I could not at first find any pulse at all. Then, all of sudden, it seemed to start off. I pulled out my watch and broad it. I made it a hundred and forty seven to the minute. I fired to feel my heart. I could not feel my heart. It had stopped beating. I have since been induced to come to the up map that it must have been there ad the unie- and must have been beating, but a cannot account for all parted to sell a lover my from from what it all my was stup to my head, and I were a bill round each side, and a little way up the back. But I could not feel or hear anything I meet a look a my tongue, a stuck it out as far as even it would go, and I shut one eye and tried a examine it with the other I could only see the tip, and the only thing had look a gain from that was to be more certain duan before that a had sear of fever.

I had walked not the reading-room a happy, healthy man. I crawled out a decreptiwreck

went it my medical man. He is an old charm of mine, and feels my pulse, and looks at my long ic, and to as about the weather all for nothing, when "laney I may also I thought I would do him a good turn by going to him now. "What is doctor wants" I said. "A practice. He shall have me. He will get more practice, but of me than out of seventeen hand, ed of your ordinary commonplace patients, with only one of two diseases each." So were straight up and sew him, and he said.

"Well what's the matter with you?"

3 Stird

"I will not take up your time dear boy with to ling you what is he matter with me, for since and you might pass away before I had fire shed. But i writtely you what is not the matter with no. I have not got housemaid's knee. Why I have not got housemaid's knee, I cannot test you, but the fact remains that I have not got it. Everything else, however, I have got."

And I tom him how I came to discover it all.

Then he opened me and looked down me and clutched bond of my wrist, and then he hit me over the chest when I wasn't expecting it—a cowardly thing to do. I call it—and immediately afterwards butted me with the side of his head. After that, he sat down and wrote out a prescription, and folded it up and gave it to me, and I put it many pocket and went out.

I did not open it. I took it to the nearest chemist's and handed it in. The man read it, and then handed it back.

He said he didn't keep it.

[said

"You are a chemist"

He said

"I am a chemist. If I were a co-operative stores and family hotel combined, I might be able to oblige you. Being only a chemist hampers me."

I read the prescription. It ran.

"I lb. beefsteak, every 6 hours.

Ten-mile walk every morning.

Bed at 11 sharp every night.

Ana don't stuff your head with thines

You don't understand."

I followed the directions, with the happy result speaking for myself that my afe was preserved and is still going on

NOTES

"The man who was a Hospital" is a fine example of humorous exaggeration. The author withes the reader to have a laugh of his expense. But he was not wholly wrong in contineing that he was suffering from almost all diseases. Ou to a large number of diseases have common symptoms and I you read a book on diseases and their symptoms you will find that you have many of those symptoms. Behand all this failtastic exaggeration is the sound. advice - don't stuff your head with things you don't understand.

Words Explained:

rymptom

condition in body which is sign of disease.

impelled:

driven forward

virulent :

DOISOBOUS

Eliment :

disease

Indolently:

besily

distemper

o contagnous disease

premonitory

symptoms:

forewarming symptoms.

borne .. me :

I conjugad

St. Vitus's Dance :

name of a disease

rift ... bottom :

to know thoroughly

plod

go on working, walking, slowly but without stopping

alight :

tristali.

invidious reservation : a reservation that gives offence

grasping: so fish

pharmacology. theory of the use and sale of medical drugs

malignant serious, violent

acquisition: something worth acquiring, a rare thing to have

crawled . . wreck walked out stowly like an old and feeble person who has broken

down.

butted. gave blow, pushed with head

hamper: obstruct seourge: to afflict

ANSWER THESE QUESTIONS

- How did Jerome K. Jerome come to suspect that his liver was our of order. What were the diseases he thought he was suffering from on reading a book on the treatment of diseases?
- 2 What was the disease held scovered be didn't have?
- 3 Was he pressed to find he didn't have it?
- 4 What was his first reaction?
- Why should be be an acquisition to the medical class?
- Describe his visit to the medical man.
- 7 He thought he was doing the doctor good turn by going to him. Why?
- 8 What was the prescription given to him by the doctor?
- 9 Describe his visit to the chemist.
- 10 What is the aignificance of the doctor's advice don't staff your head with things you don't understand?

MY FINANCIAL CAREER

When I go may a bank a ger att ed. The clerks rattie me, the wickets rattle me, the sight of he money rattles me, everything rattles me.

the moment I cross the threshold of a bank and attempt to transact business there. I become up irresponsible ideal

I know the highly to the save salar than been to sed to fifty-aix dollars a nonth and I telt that the hards a same to any process to the

So shoutbled to and sole in made round at the clerks. I have an idea that a person about to open an account or assessment, their imager

West up to a weeket stanced. Accountant. The accountant was a fall, cool des. The very sight at him ruttled me. My voice was sepulched.

"Can I see the manager of said and added so equipment a one "I don't know why I said alone."

ertailty is addie accountant and etchedlem

The manager was a grave calm man, held my fifty-set quitars, in thee migcrampled ball anny pocket.

Are you the manager " said from know all didn't doubt to

"Yes," he said

Can see you. Lasken, laione I didn't wint to say laione again, but without I the thing seemed self-evident.

The nanager tunked as near some alarm. Refel that had an awful secret to reveal

"Come in here the said, and ed the way to a private room. He turned the key in the ook

We are sale from sterruption here the said istidown

We both sat down and looked at each other. I found no voice to speak.

"You are one of Pinkerton's men. I presume the said

I e had gathered from my mysterious manner that , was a detective. Herew what he was thinking and it made me werse.

No. not from Pinkerton . I said, seeming to imply that I came from a rival agency

To tell the truth," I went on as if had been prompted to lie about it. "I am not a detective at all. I have come to open an account. I intend to keep ad my money in this bank."

The manger looked relieved but still serious he concluded now that I was a son of

Baron Rothschald or a young Gould

"A targe account. I suppose "He said

Fairly large "I whispered is propose to deposit fifty-six distants now and fifty dollars a month regularly."

The manager gover and opened the door. He can ed to the accountant

"Mr Montgomery he said unkindly fould this gentieman is spening an occount, he will deposit fifty six stoliars. Good morning

Trose

Altig ton door stood open at the side of the private room

"Good morning" I said, and stepped onto the safe. "Come ou said he manager cold.y, and showed me the other way.

went up to the accountant's wicker and poked the but of money at hon with a quick convalsive movement as if I were doing a conval ing trick.

My face was ghastly pale

"alere." I said, deposit the tone—the words seemed to mean. Let us the this painful thing whose the fit is on as."

le took he money and gave it to another clerk

He made me write the suit on a slip and sign in y name in a book

ino longer knew what I was doing. The bank swam be identified eyes

but deposited?" Lasked in a hollow is brating voice.

"It is," said the accountant.

"Then I want to draw a cheque "

My idea was to craw out six designs of a for present use.

Someone gave me a cheque-book through a wicker and someone else began tering me how to write a out. The people in the bank had the impression that a was an invaid mit tionaire. I wrote something on the cheque and thrust it in at the cierk. He looked out:

"What Are you drawing ital out again?" he asked in surprise

Then a realized that I had written follows: a instead of six was no far gone to reason now I had a feeting that it was impossible to explain the thing. All the clerks had stopped writing to look at me

Reckiess with misery. I made a plunge

"Yes, the whole thing."

"You withdraw your money from the bank"

"Every cent of it."

Are you not going to deposit any more?" said the cierk, astorished.

"Never"

As in at hope struck me that they might think someone had insulted me white I was writing the cheque and that I had changed my mand. I made a wretched attempt to look ake a man with a fearfully quack temper.

The clerk prepared to pay the money.

"How will you have it?" he said.

"What P

"How will you have it?"

"Ob" a caugh, his meaning and answered without even trying a think. "In

He gave me a tifty-dollar bill.

"And the six?" he asked dryly

He gave it to me and I rushed out.

As the big door swang behind me I caught the echo of a rout of another that went up to the celling of the bank. Since then I bank no more, I keep my money in cash in my trousers pocket and my say against ver dollars in a work.

NOTES

Words Explained.

get rattled gets on my perves, puts me at a loss

Wicket: a small

irresponsible idiot : a careless fool

thamble walk ng badly without ifting feet enough

sepulchral funereal, gloomy

erumple, get crushed mo folds

Rothschild. a family of international bunkers

poke : push

convulsive movement with violent uncontrolled movement of muscles

conjuring trick: do tricks producing seemingly magic effects

vibrating: thaking

invelid millionaire a man of great wealth who is disabled by illness

reckless . rash, not caring for consequences

ANSWER THESE QUESTIONS

- What aghi do the following expressions throw on I encock's state of mind when he entered the bank "looked timedly round" shambled in"
- 2 Why did the manager come to think that Leacock had an awful secret to reveal?
- What was the attitude of the manager towards Leacock on learning that he only wished to deposit 56 doilars in the bank?
- 4 What other blunders did I eacock comma after leaving the manager's office?
- 5 After this misadventure in the bank where did Leacock keep his money?
- 6 Give as many examples as you can to show that I eacock was feeling completely jost in the bank all the time he was there

CHINA'S WAY TO PROGRESS

Galeageo Saptini

In twent that a control of the standard was control or with a small standard of spirit occasions he has a control based on the world's that large or can't was he ugo on the memory and with a make it which the head of the third barge or can't was he ugo on the memory and with a make it who he warm high the crewd of the standard the standard of the s

the same the fashion around the world and in no uncertain terms. Everywhere put to me, the mass conservative and huntiers is kind are unempting to rebuild for them serverally approved after the single of he proved the Mass factory.

An Exemplery Social Experiescet. When contributing the engine of the Chinese plane too many Westerners have to got on the Asian background and partful combine his any lists when the improve streamen nower in why the case mainly of the country surface on as the been during for he past 1 to a years, nanearly too Age en animy. And on our miless occasions during our visit to be agree. Jurial communes we were proughy told. If the weight were have the term to be a mad horses. Compared to chine in 1949 Russia in 1916 and have the grown take the results of a shutlering much color all experience. Russia never suffered China viate in such a charp and pervasive Western impact that it was forced together with many other Asian, civil vations, into a kind of national schizophrenia not just in terms of a spit economy, but above all in terms of a spit culture and a split periodality.

In China the and vidua, has been rescued from the aftermath of this unfortangle heritage by the newfound companionship common purpose and discipline of mass-organization. Just as the Vietnamese have withstood American technology so the ascending limit Chinese have gotte straight to the roots of the problems that have plagued Asian countries for thousands of years—the tack of food and low texes of numbers, gross thequal lies of recome and consumption, unemprovement and a sense of social useressness, and the blind expansion of the cities.

Decentralised Economy. The gigantic Chinese social experiment does not into viconcern Asia to wever but the West too, which has always claimed a have found he fing, answer to the problem of man area on massen, that years the vidinese have been strong to make the world realize through their official interpreter and personal mend. Man, Edgar Snow, thus there are other important things in Lie besides an increase in UNP.

The chanese model cannot be analysed according to its differences from the Western system. It involves an afterly different approach from the creation of a new world and a new man. They ties show an absence a hadronisob tes (which is ineither backwardness not de ay, but a rejection, ino quote Robert course in it, advertising income and the three fevers of money alcohol and sex. Positival control over the masses not only stops the exposus from the country side but even manages partly to reduce the populations of a residual from the

In the year 2 PR China will still be a powerfully agricultural and peasant country for to modern zamen will have occurred without a flight from the fields, which is the price paid by the West in a hina too the everage size of farming concerns is growing, hrough the system of copyrights. With subdevisions into production brigades and teams, but the greater part of the peaser masses stay put and carry on their said ional intensive about Agricultura mechan ration is being introduced with considerable caution so as to avoid apsetting the be ance. But the essential point of the matter is that the agricultural labourer fluingh possibly. deprived of farming much tiery must not and does not want to be urban zed, by its national kept on the spot and he reported in today small industries. He was he' like the const because the industria row passes through a technica societies act a tot and a decentralized industry incomprise decemps gration, which a perhaps he may important supin Chinese comestic policy a rice the Creat Profetansin cultural Revistor on Transfered China from a traditionally combersome bureaucracy and developed local enterprise. The greatest possible degree of independence. The 26 (house printinger, which are an in och as even 4.4(f) to ometres apart, could for that matter subtration their own in the event if war, while anybody invading the country would be iderally drowned in a sea of people.

This brings as to the human side of this Chinese experiment in creation of a new world. It is simply a matter of providing that Thomas Hobbes was wrong when he wrote in his "Levisthan, that "man scondition is a condition of war with everyone against everyone." What is taking place today in the world's most populous country is therefore the education and re-education of man. The heart of the matter is the need to root out setfishness and bring into existence setfless, dedicated men whose happiness come sis of serving their real winner in the fullest sense of the human community. In a humanism at the service of collective we fure. China is striving to conceive modernization as part of a process of embelt shment of the land-scape development of the people's cultural. Furfor the benefit of all instead of for the benefit of the placing the needs. I man before those of the machine.

Here is what the Peking People's Daily has to say commenting on Mao's famous maxim. Rely on your own forces. National maximes and equipment are not entirely

and genous sence they possess a number of foreign features. They may replace foreign machines because they are superior to fore go equipment, they don't require money or of any rare very little, and are capable of doing great things. It takes much less time to use and genous equipment, which when not available can be promptly prepared. Indigenous equipment can provide higher faster better and cheaper resonance. So it is can stread at the resonance spirit of the masses and with this resonance up is all difficulties can be overcome."

Day in the Life of a 16-year old. How do he students we and what do they think and viduous. Despite having to use an interpreter I was able to find out. Here is the result of my laters exist the Wen-Six a strateon-years old girl who was in the workers distinct of Peng Pu at Shangha. She was pupit in class 3 at the union school. She will shortly be taking her diptoma. How do you spend your day? "I get up at 6 o clock in the morning do a few chores in the house have breakness and go to school at 8. It in she at 11 o clock go home and have lunch. At one thirty, in back at school again unto 3 o clock. Then, go back home and work. I not much time do you spend on homework at home." We'll actually I do my homework at school. At home I go through the casions for about an hour. From 4 o clock on I relax reading the papers and internal and internal and situation." "What do you do when you much to the total politicists. Then go out with grant and buys at my age. We do so he sports also often play prog-pong.

Chinese Women. It im a Western angle there is a use of ferromainty in the Chinese women. We beauty products no memory of sex either in a his in biculture. In the land of apium, drugs are upper stent. Man says that women hold up had the last and women, for the right are determined to keep their half mised at the same heigh, as the heid up by men. When the Chinese is impantive social benefits she entities. It hour work he day free hispitalization and medical care nursers and infant schools, 56 paid days he one of ild high a sorw in interhange, she always concludes by affirming that in the West women have not yet succeeded in obtaining at this. However, we Chinese are working so that the women of the world can be equally happy, and empty the advantages we have. This rad can change in women's conditions in China has given women a sense of confidence hitherte unknown to them, and gritty and an undoubted awareness of carrying out an important role.

Social Security Benefits. The monthly cost of living is officially calculated for every region of the country in Peking for example it was recently quoted at 12 - 14 years a month 4.80 - 5.60 dollars) of which 10 go towards board and 3 - 4 for rent in State apartments. Many workers are also housed within the factories. In the agricultural communes housing is completely free Certain small expenses such as cinema, theatre, have uts and work overalls are also sometimes non-existent.

A medical and hospital treatment is entirely free for every Chanese worker or peasant, while members of their family only pay 50 per cent. A sick worker receives his total

The series as other

technology a stall a meaningful one

CONTRACTOR OF THE RESIDENCE OF THE RESID

pay cheque for the first warms the latter which the recommend to however the parters has money problems, up to a conservation of the fact assistance. Fact plant Bu dry or agrico fora con to a conno sale sist as Op in the serious cases are the sick complete wathout at gas they lover . contract of the second as passed retirer -, כי זון. זון זון דון יי I we will be in the where the a meter an reconcals a day for and Committee that the a bindan h a to be good of the s regardens where a no of a figure as c 10 10 50 1 Product Some the in any he tone is a with the other with the out " appropriate the same

The Chines and a state case of the state of

Y & K - 11 X X Y a proceeding of the a to the no surface and for a conand the property of Phore are see a ments of the ging to fine a the mice and that the side size in a sheat The other a or a fifty of the contract of the or with the me R and he craft a ross with the hear success by a newers the he might are rt a so in order Remon , and the A yeardstick beures to a 174 CALLERY OF THERE AND A N. Mr. 1 htt de am gratishe in in the previous a new mean with a supjecting abouters of the will True o increase nietre per head the available R 1 Profession Villa need enough croth to go round the workers have a which he purchase of a bit of the or is a fire to the ha Plans of gram is only sittly, entito each had the control of the control are sittly but when the number is not in the property of the service whose then ends to become "Power when Mar was had as the people and not things, hat are decisive helistry ag a factor demonstrate to. " - oncorr apparently destroyed by modern

NOTES

The article on Chara gives as some insight as to how China has made phenomenal progress since Independence in 1949.

The People's Republic of China is me of Pakistan's closest friends. She has provided both my stars and every country. She has resolutely should be as in every crisis as in 1965 and 1971 during her wars with indicational had a settimely supported us in the Limited Seatons during the supported with the seatons during the supported with the seatons during the seatons during the seatons and supported with the seatons during the seatons during the seatons are seatons as the sea

Words Explained:

occidentals I ropean Western

smile: here's needs we come

mounting attreasing oblivion , forgetting

seblzophrenia a menta disease

bourgeois andole class

CNP 1 - Soft of Productions moducion of a country in a year

model: here it means, oconomic system

exodus: emigration

embellshment the auto-by men ny locorating

great proletacian cultural revolution. In movement cache to 1966 to denounce

her stonust behindles

Thomas Hobbes 5-88 go i a dish of lesopher and one of the greatest

political thinkers of his nation

Leviathon a masterpiece of Thomas Hobber tustanesition placing of facts, things side by side

ANSWER THESE QUESTIONS

- Why has the world change a do attitude towards ("hina"
- 2 Discuss Chinese agriculture system
- 3 How does China rely on its own resources?
- 4 Describe a day in the life of a Chinese student
- Write a note on the Chinese women.
- What are the social security benefits provided to the Chinese workers?
- 7 "It is the people and not the things that are decisive." Discuss
- 8. The heart of the matter is the need to root out so fishness." Discuss

What is it does not be ready henger. I expect has at sometime you have all come home after an energetic game of corbid or nothed or after a few hours when you have been for busy to cat and said. I'm start ng. But this hanger did not us long it your mea, was not tready for you, after a few silvers of bread and his er you ingreat about those hanger paries. But hanger does not mean moving one meat or even meals for a whole day it means never having enough to eat. It means, when you have had some thing a call of ensurement again it one means a situation in which you are always wondering where the next means a complete transfer with the control who all operation to be a member said of starts the hidden after visiting a matrix too centre in Kenna. They are the chind on whose every started at the whose legs and arms are like stocks of squarter who he has engage and who weigh 101b to the age of two years!"

Fair no has been a problem since the becoming of time. The early hunter suffered grave shortages during the witness his and post, often these were sensus comigh to near staryation for him and his family.

One of the first records of tachine was carsed to granule by and gardian Philippin Lie and. During my regardle bale has not been in those for sexual source or was a factoring. There who has contracted was a fine most bins are broken open and empty. On the end of everything."

by great in the Public of many cases of far any. There were seven years of non-ne-inby great and the surrounding country side of my he are of meeth whitespread a surrounding countries were left hungry foreigns many heads of a management during pient for harvests. Egypt was saved from fair no by his national official hut may theopte in the surrounding countries were left hungry foreigns may brothery came a Ligypt from Palestine to buy grain.

From the birth of Christ to about [8,30] there are records of famine in Europe in 150 different years—one famine every five years—in rigiand during he same period there was at least one major famine every ten years. These were general famines when a large area of the country was affected but there were mains more local famines. We can get some dea of these famines from our folk-tore. The stories of Robin Bood often involve toes food shortages with Robin helping with transport of food, robbing the righ to feed the poor or poaching for them from the Royal forests.

But famines in Europe have been much less serious than in other parts of the world. China had ninety major famines in time century. Nine and a half in litton people perished in a

wingle girme which kept history of the notice as corr. In The Russian familie in 192. The Russian familie in 192.

three an even worse, area of familie

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The state of the s

And the terminant of the member of the people and a not how growing of the Butter in these a seasons people have in a comparative small number of the dreamle low death rate means the helps post more to growing tank rated vibrated S.A., where an an average much since the members of the seasons may have a season of the seasons may again ever general me

In As a and the Far East, he death rate has been reduced rapidly by modern med cine and endertic continuing on for example, the death rate was reduced by one third in two

years by greatly reducing mortality from harasta. This was does not discovery 6. DDT which knowled off the mosquitoes which coursely a single

Another example is vaware him.

disease starts as the harmpropers who will introduce him him to the formula of the spreads all lever the body forming officers. Whish experiences a non-homes to denote the sufficient becomes depressed and least very think to have the first the formula of the sufficient that you was could be cured in most fuses him to be a mind, and therefore was the most fuses him to be a mind. The sufficient was the sufficient that the sufficient has a sufficient to the sufficient has a sufficient to the sufficient to the sufficient has a sufficient to the sufficien

The most important one the me it is an active a series of the family

The study of the population great this disease since the process of a since the Broad of continues have able to copport a laptic to give a population in this is read vely low birth rate while the given cost able to opport this is process population, at a mentarger one has a very high or others.

Let us sook for a somen at the second prime to a second advised descriped countries, into which so many of the choices into a source sate and a second second which be seen in the second with beggard in the offers and age sincing in a base sincing in the cities and age sincing in a base sincing in the second of the country incking factories of its own assaults with an industry in the second of the second o

The gap in vinit standards is bound or na reason in the base the pain at an its an only been reduced by fair ine and I leave build to be war of the power to about shour flower have the writing a frequency of people continued for an account sees is on the and friends suffering great a size is time amisconstant that have an another as the pool people in the world gets richer we are creating a great line while on large or poor a make war on the rich.

The only congression answer or these countries and it is not best as have explained this will cake the and or not east or achieve what we must do to the meantime is to keep a tree as many people as we can and the same to be make every effort to encourage the limitation of families.

NOTES

Words Explained:

pangs sudden sharp pain

Guardian an influential British newspaper

Enjangue brack substance used in medicine and as a sweet

carve in granite insurbed on stone

food lines . great wide-mouthed boxes or vessels for grain, coal, etc.

disaster great, sudden trouble

avert Keep off danger

local famines shortages of food in conited areas

folk-lore common beta stones handed down from early times

perish come to death, suffer destruction

cargo goods transported by ships

threat sign of coming danger or trouble

gigantie: huge

population explosion sauden increase in population

cetting a numbering a persons in a country by government

fraction: small part

mortality number of deaths, death rate

pimples sona - hard spots caused by inflammation of skina

blotches red pasches on slon

ulerr open sore

depressed feeling unhappy, low-spirited massive programme; great, extensive programmes

under-developed

enuntries backward countries

eking out a bare

substatence carming fast enough to the

power work once produced by machines

few and for between: care

Ruetuntlons trregular rise and fall

abolish o de awas with

limitation of families not having many chadren, having small families

ANSWER THESE QUESTIONS

- What does hanger mean on a large scale as viewed by the author?
- Describe some great famines of the past.
- How do famines occur?
- 4 What is the main reason for population increase today "
- 5 What is meant by birth-rate and death-rate and how do they affect the population of a country?
- What have public-health measures to do with increase in population.
- 7 Account for the high birth-rate in under-developed countries
- 8 Why is birth rate not so high in the more advanced countries
- Give a brief account of the poor economic conditions prevailing in under-developed countries



THE JEWEL OF THE WORLD

OF THE K HILL!

I was an TS into the late of t

A nongehovery a fine contract to a series of a series

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the south of Sp. 1 in a set Syring it and a set Syring it and a set and set of the set o

The precess of the short Rainen developed a velop on planed high strange are the same to the short her to de evered the man to the short along his and he same the short and he same the same that the

recognized couph in Islam.

with his reach consultated, Abd-al-Rahman turned to the arts of peace to which he so wed hit so, as great as in the art of war life beautified the cross of his domain, built an ite supply of pure water to the capital instituted the construction of a wall round one of every to the sapatale and garden outside Cordova in instant on of the public built by up a roes, in innorth-eastern Syria. To his vitia he brought water and instructed exotic process, such a peaches and principlanates. To a topicly palintree in his garden, so to be the transfer of the syria he addressed some tender verses of his own composition.

It wears before his death in 788 Abd-al-Rahman founded the great Massid of Completed and Complete the two massind of stand at lectusatern and Markah Completed and complete his precessors it soon became the shrine of western Islam. With its unest of water vicinities and its spacious outer court this nobic structure transformed quo a christian cacheurs in 236 has survived to the present day under the popular name. It is masside the sides the great masside the capital could afready broast a bridge liver the magnificant property in a name of the sides the great masside the sides and afready broast a bridge liver the magnificant property is after emerged sever be arches Norwere the interests of the founder of the I may vading me in red to the major at well are of his people. In more than one sense he initiated the intellectual in tement and a made stands spain from the night to the eleventh containers are of the two centures of world on ture.

the Hyzant ne emperor as well as from the monarchs of Commany Italy and wice a stead common with his fairn him phabitants, seven hundred makapte and hree from in the hundred makapte and hree from the hundred makapte and hree from the hundred monarchs of Commany Italy and the remaining plants haths well do in magnificence on a to Bughdad and Constant hipto. The remaining housing the constant hipto. The remaining a stood north-west of the town or emporting the Chadalquiry r River Abúnants of the same of a same at several plants with golden statues were imported in received as more than a constant hop claim to 956. Marbie was brough from Number and and the same of the same of the same with soft beasts burden abouted on the remaining a same and 10 000 with men with soft beasts burden abouted on the remaining a same and the number of the remaining the constant hop cannot be authority whose remains partly excavated in and after 1910, can still be seen

n mbered 1.25c and hended his standing army of a hundred thousand men. With their aid the call phinotonity kept treason and brigandage in check but reduced the influence of the old Arab aris: scracy (commerce and agriculture flourished and the sources of income for the archivere multiplied. The royal revenue unformted to 5.245 MJ, dinars, a third of which sufficed for the army and a third for public works, while the balance was placed in reserve. Never before was Cordova so prosperous. And alustic so nich and the state so triumphant. All this was achieved through the genius of one man. He died at the ripe age of seventy-three

And he left a statement, we are fold, which said that he had known only fourteen days of happiness

As always, under any dynasty, sovereignty in the Mushim would. West or base, was anstable in Spain the Linguistic Reputite nominal rule from the line Abd-a -Rahman imposed. But by the time of the accession of the next outstanding figure in the vinasty. Abd-ai-Rahman in the year 912 a vit disturbances and tisbal revious had reduced the Masamistace. Spain to the line of Cordon and Is neighbourhood.

They there Abasal-Raturate The his illustrious predecessor was a ing man when he truck affice being only twenty-three and take him also was a light of time, gence and geteric hallon. One by one he reconquered his lost provinces, reduced them to hider and administered them with sagar in and ability has reign lasted by its years from a 2 - 961 an exceptionally ling time for that day it was signal zed, period at his his proctation in by the arm riot nature has couple. With him the Unias vadical phase in Spain begans. It is reign. and hall this roce immediate successors, mark the heigh or Music rule in the West In this period, roughly the enth-century. He campy advaption of and the took map are us facilities. cultured city in compension with consume nopile and staghdad as one of the three culturacentres of the world. With as one hastared and thirteen thousand homes, wenty-one suburbs, seventy libraries and namerous bookshops, mass id and paraces in acquired international fame and suspices awe and admiration in the hearts make lets It emoved mines of paved streets, up noted by ig the mobe hordering houses whereas, seven handred years offer this time there was not so much as one public samp in Espacial and in Paris concernings subsequences, whoever stepped over his mesho don a most dus stepped up to his mikies in muse Whenever the rooms of from Navarre or Barce on a needed a surgeon, an archived in nusters aget or a dress-maker. Assist argonather they applied. The table of he Maxim capital penetrated distantificermans, where a Saxon nunsity edit, the lewell of the winted."

Spain under the valiphate was one of the wearth estiano most thickly pupillated ands of Europe. The capital boasted some thorieon thousand wealers and a flour shing content industry. From Spain the amoit tanding and embossing leather was carried to Morocce and from these two lands it was brought to France and England, as the terms cordovant cordinal net and motocco indicates. Woos and slik were woven not only in Cordova but in Malaga. A mental and other centres. The raising of sits worms, ongotally a monopoly of the Chinese, was introduced by Massinis into Spain, where it thrived. A mental also produced glassware and brasswork. Paterns in Valencia was the home or pottery teah and Algarve were noted for their mines of gold and sits er and decorating them with flower patterns, an art introduced from Damascus, was famous all over the world for its swords. The art of integring steer and other metals with gold and sits er and decorating them with flower patterns, an art introduced from Damascus, flourished in several Spanish and other European centres.

The Spanish Arabs introduced agricultural methods practised in Western Asia. They

dug canass, cultivated grapes and introduced, among other plants and fruits, rice, apricols, peaches, portegranates, oranges, sugar-cane cotton and saffron. The south-eastern plants of the permission, especially favoured by climate and soil, developed important centres of rural and urban activity. Here wheat and other grains, as well as oil vex and other fruits, were raised by a peasantry who worked the soil or shares with the owners.

This agricultural development was one of the giories of Maxim Spain and one of the Arabs, asting gifts to the land, for Spainsh gardens have presented to this day a "Moorish character. One of the best-known gardens is the cionerality," a word which comes from the Arabic Janua, all-artiff the inspector's paradise. This garden, proverbid for its extensive shades, its ling waters and soft breeze, was terraced in the form of an amphabeaute and migured by streams which, after forming numerous caseades, lost themse was among the flowers, shrubs and trees represented today by a few grantic expresses and myrties.

The natural and agricultural products of Muslim Spain were more han sufficient in gomestic consumption. See the one of the greatest of its twee ports, expanded cotton of year and site. The exports of Mataga and Jaco included saftron figs, market and sugar Through Alexandria and Constantinopie Spanish products found markets as ar away as lind a and Centra. Asia: Especially active was the trade with Damascus, Baghdad and Makkah. The international national vocabulary of the modern world contains not a few worlds which testify to the former Arab supremacy on the seas.— admiral arsenal, average cabin

The government maintained a regular postal service. It model ed its comage on Fusiern patterns, with the dinar as the gold unit and the dirham as the silver unit. Arab money with mose in the Christian kingdoms of the north, which for nearly four hundred years had no comage other than Arabic of French.

The real giory of this period however lies in fields other than political Al-Hakam. Abu-al-Rahman III's successor was himself a scholar and patronized learning. He was generous to scholars and established twenty-seven free schollar in the capita. Under him the university of Cordova, tounded in the principal maspid by Abd-al-Rahman III rose to a piace of pre-eminence among the educational institutions of the world. It preceded both Al-Azhar of Cairo and the hizam yab of Baghdad, and attracted students. Christian and Mushin, not only from Spain but from other parts of Europe. Africa and Asia, Al-Hakam en arged the mast dishibit housed the aniversity conducted water to it in lead pipes and decorated the with most its brought by Hyzantine artists. He invited professors from the East to the university and set asiae endowments for their salaries.

In addition to the university, the capital housed a library of first magnitude Al-Hakain was a lover of books: his agents ransacked the bookshops of Alexandria. Damascus and Baghdad with a view to buying or copying manuscripts. The books thus gathered are said to have numbered 400,000, their times filling a catalogue of forty-four volumes, in each one of which twenty sheets were devoted to poetical works alone. Al-Hacani probably the best scholar among Muslim camples, personally used several of these works in stoics on certain numbs. The rendered them highly prized by later collectors in order to section the tiret upy of the "Agham" which Al-Isbaham, a descendant of the maxivads. Was hen comprising in Iraq Al-Hakam sent the author a thousand dinars. The general state of the tire in Andolusia a reached such a high level at this time that the distinguished Dutah scholar Doys went so are as to obtain enthusiastically that inearly everyone could read and write the author of the scholar Doys went so are such as the continuous time that he distinguished Dutah scholar Doys went so are such as the obtained and write the scholar properties of the run ments of searning were known. The search is a less churchmen

NOTES

Words Explained:

extermination: destruction of all

nerve quanty of facing danger well

aquiline Ke an eagle hooked nose

beed ; give attention to

refuge place of sheller from canger or trouble

estuaxination putting to death violently

contest . dispute with arms

consolidate : make position strong

aqueduct. Structure for taking water from one place is another

forest liese arge number of priors

transform change, make great changes in

faltitute: get started; introduce

nucleus : middle

excavate . dig and, get old buildings free from earth covering .

nagacity: wisdom

proclamation a pubac announcement

penetrate pass through, here it means, reach
thrive do well, quick in growth, prosper
embors make pictures of, or on, in relief

Valencia a province of East Spain

proverbial: here, well known

amphitheatre circular binlding with seats rising behind and above each other

round and central open space

nauncal of ships, seamen

average. here it has been used in the sense of duty upon goods

Al-Arbar a university of Cairo in Egypt

endowment act of gising property producing regular income especially to

organizations

magnitude size, degree of being important

mnauscripts books written by hand, not printed

Aghani: a book on music

rudiments - now eps or stages in some branch of knowledge

ANSWER THESE QUESTIONS

- adventures in Africa.
 - 1 . Abds a leabman deal with the governor appointed by the Abbas a cataph is contest his rule?
 - will be him at physicip receiving he head of his governor.
- 4 Above Ray mande to make himself strong and inhearters his cap in 2
 - Control of the All-round progress made by the Arabic ander Abook Remain
- 6 w 86 3 M. Jake into to promote learning and scho archip in his kingdom?

PART - II



FIRST YEAR AT HARROW

Sår Wigston & Churchill

I had scarcely passed my twenth birthday when I emered the inhospitals executions, through which or the next seven years I was destined a journey. These examinations were agreat that to tear. The subjects which were dearest to the examiners were actions invariably base, tank too lease, a would have I ked to have been examined to bishory partiry and writing essays. The examiners on the liber hand, were partial to call month multiconducts. And the nix I prevailed. Moreover, the questions which they asked in high chese subjects were a mast invariable shows to which I was unable to suggest a satisfactory answer, should have I weath be asked to which I was unable to suggest a satisfactory answer, should have I weath be asked to a high lines. They always medit easy what have when the not know which have to may have a single of a pasself to allow edge they some the expression grant and it is not result to allow do well mexaminated in expression.

The way espected size of my Entrance I state not in the Headmaster. Me welfare were so a procedimended view of my attriprose he showed it scerament that he was not a procedimended view of my attriprose he showed it scerament that he was not an about the proof he page of the page of

In a through the decision,) was in due course placed in the third or lowest. Just in alphabetical order and as my correct name. Spencer-Church I began with an Sill gained no thore advantage from the asphabet than from the wider sphere of letters. I was in fact only two from the bottom of the whole school and these two. I regret to say disappeared aimost ammediately through disease or some other cause.

continued in this unpresentious situation for nearly a year. However, by being so long in the lowest form I gained an immense advantage over the cieverer boys. They all went on to learn Latin and Greek and splendid things, like that Buill was taught English. We were considered such dunces that we could learn only English. Mr. Somewell, a most delightful man, to whom my debt is great, was charged with the duty of teaching the stupides; boys the

most derogarded thing in namely to write amore birg ashille know how that the stagh it as the one is selected and beginning the part of chorough, but we also processed continues, where is handates. Mr. Sometivel had a system or his own it to look the rhy ong sentence and broke in planto its components by means of brack residue in a green take. Subject Verbil Object Relative Clauses, and it may be a sent of the live one. Disjunctive Clauses' Firch had its colour and its bracket it was a kind of the live of admost daily. As I remained in the Third three times as hing as anyone else in the live of as much sit is commended to be might be a public thing as anyone else in the live in the ordinary Bratish sentence. The had a public thing And a density after some in such interesting to the had a process and beautiful and may be asserted in a part of made. Creek energy instead to time advance of a minute time table to can the owner as a finished and the had a process and the major of a minute time to be a finished to the live of the major of the live of t

NOTES

Words Explained:

Inhospitable: uninviting Invariably: always

Enneled: liked

partial Rad a taste for diaptay make a show of

expose let light on, bring to view

broad-minded Lheral

discernment understancing

reflection thought

relevant to the point smudge dirts mark

usher door-keeper

slender than small poor

unassuming unassuming

dunce foo!

components forming pans of something

structure form

plthy: short, keeping to the point, full of force

epigranu: short, pointed sayings

bias . have a tendency to favour

treat: thing that gives great pleasure

ANSWER THESE QUESTIONS

- The writer says that the examiners ask questions which students enunot answer and not those which they can answer Is the complaint just?
- What sort of questions are asked by your examiners?
- Why did not Charchill do we limexaminations?
- 4 How did he do his Laten paper?
- 5 Churchii was taught English at Harrow and not Latin and Greek. Was it a gain or toss?
- 6 What good did his three years stay at Harrow do him?
- 7 In after years how did the knowledge of Laguish stand him in good stead?
- Write an appreciation or criticism of Churchill's views in regard to the study of Latin, Greek and fing ish and their value in carring a living.

G. F. Lamb

that were a pilk ingland up and put indown in the middle of the Sahara desertive should have a local set to find at. The hair sahara area, stretching duminat the complete worth the other cases in its amount of the salara area.

About this an extent mader French control Vers recently indeed the ascences. The first the first has began a bring changes but less han bree years ago not a first to the first the first water set and the segeration large parts were not a first the first the event past a few towns very widely sed and outlier to words and the segeration.

the control of the control of the control of the same that the second of the same that the same that the control of the same that the same tha

When is such a even time by was to a little regressionless associational to send at 1 mile and 1 mile react. French African instend of a naming from the react and the react of the beautiful to the search of the s

If he can have not training the hear training the place of the wanderloss II sifers at each terms are not to work and excess of eights deduced about 1.28. After loss the december of the same training to the Sahara form Algerts on the training of the same of the same training to the great desert.

I felt and Square is may be an attained to the Housepain give on a the name of the name of the same of the same of the desert early variety the same of the second has a desert may was earling for the worth them? I and he arranged with the driver to be given a 1flat for as it went.

The and team were agent a to Three men, driver greaser and passenger, so is deby side in the front sector as a long as a bare 32 k cometres an hour whose settlemperature rose stead. In which will kell a sown after became hot enough a make ba.

President of the most of weathous various services them. Chosenpher stopped a long hegged have an analysis of each as store like to service services which are the newtonant pointed out the store min, any take at one forbade the earth are like a Christopher replies hy providing a period from the War Ministry giving him permission to to in the trench flore on Legion for a short period at order to collect material for an article. The permission had later been withdrawn, but fortunately the Lebtenant and not significant systems see the Laple sed stamp.

He was dropped at the town of Ghardata, a typical desert city, except that the files are even more numerous and sticker than they are anywhere else

A SECURITY OF THE PROPERTY OF

"Anything that has the remotest relationship with food. Christopher states." s constant v and completely covered with fires. They have no hesitation in following he fouldings into your mouth and had to be vig lant until each mouth; of was safe vibel and my teeth. I saw many children on the streets, but I get on via vague, dealof who they maked he for they all wore a mask of flies."

He was able to containe his bitch-like to the south in the jetsurely manner that was so typical of the desert. On the day of his arrival he discovered that diere was a truck due to leave at once for EEGs on This truck was a new and powerful one and carried it, kinds of goods pins and need as, towing-machines pots and parts, machine parts, if we give entons

For about ten it sees outside the town the road continued. Then a stopped. The route lay across an apparent a trackless desert. A me the less, the dever named framour picket his way with uncanny skill.

It was asflictals travelling. At 1 mes the sand became too soft to bear the weight of the heavy truck. It was then necessary as stop at once. If the wheels had been allowed is suit hey within have any themse was deeper. I en boot strips of steel mesh were dragged from he truck and placed together to make a runway for the wheels to but on as the truck moved. When the renched harder ground the strips were collected up and dragged forward to be was ting truck. Our supplier performed useful service to helping the greater with disk are to supportation.

The driver added to the case unfort of the tournes by relating details if a recent case it which three implies people had attempted to cross a part of the desertion case whom y the day's water-supply. Their car had become stock in a sand dane, and here days rater their bodies were found directly like cases. They had commed the racks or in their despetite. This are one or their ared to drain the order the crass—case. Frantiers had been one of the search party, and he spaced his listener page of the griph details.

The story came visibly to Christopher's mind on the second morning. The greaser announced hat one of the two greatskin bags of water had burst during he right. Ever if every thing were well the rest of the numer would not be pleasant.

An outpost with a water-supply was found on one of Christopher's maps, and her set off lowards. By dawn they had gone bity miles and dug out of the more sand dunes. Christopher was suck with threst and to add to his neverty be had jumped bare-footed from the driver's cable on one occasion, not realizing the mense heat of the sand. It was us if he had jumped into a bed of hot coass. With a scream of pain he hopped back into the truck.

Meanwhile, his thirst grew fiercer

"Everything was dead and dry and hot. My mind was foggy I was on fire, the

maide of my head felt dried up and my lungs hurt from the hot air. There were times when I tried to make myself faint but my head was pounding with such pain that it kept me conscious."

The instruction as discovered at last and it contained a well full of coor water. They drank until they could drank no more.

The section installed it. The heat was introduble in the shade of the mud house the temperature reached. 30 ft. in le out on the sand the thermometer registered 165°F, which is nearly thirty pegrees in given the highest temperature officially recorded.

I (nites, a bindred miles on, was reached without further mishan. It was a fact, on or interior in a time coses, with so much water available that they hardly knew what is do with the end down the week that he was there (housepaper spent hours bathing in a tricipout hat a kill another from the centre of the town, shaded by palmotrees and from these or a notific to the configuration the centre of watching the birds feasing on the dates. What a contrast from the desert all around it.

The paintee from E. Golea to In Satah was not without its excitements. It was made it in nearly truck carrying ten tones of amenuation, driven by a particularly able and experiences, criver who made but way across the apparently trackless desert, was a source of constant emizement to Christopher.

hereby the next by Christopher inflored the other waterestees Bubenied to make the or at twee a be a provided by former a brile wine with the water Christopher was done to be the patient of the make th

The rots are dispersions. The reporting best of the day they were being in the shade of the trick and the Arthur section. It we are considered from the description by part of As the way a mining sign because such tenth even using the present extensions. Purpose such and the found be moself ship energy a might be known the way going a compact of the many a despension effort a count the blacking sand. His fall as he blacked out fortions as a like the other two and they dragged him completely into the shade.

If it at tour he could not speak, hits two companions took, aff their turbans and noticed water in them, is not them to rish his body sensity in order to keep his temperature flow. With he refer meet his senses they gave him as much water as he could drink.

The country of the waller to not the only respect in which in Solah differs to a State of the arter two with its shady swimming-pools and its local month trees and pippin has treatmented or on the harmonics of the discrete in Solah is fighting a despite of build for survival, and perhaps using the contest. The sand is constantly enormathing in the town.

Parts of the town are being swallowed by the desert. It is a frightening thing to see Man has gred by every treats to held it back, but in some of his efforts, the desert keeps tightening to strangle-hold. Pain-frees that once lifted their branches high above the dimen

are now like bushes, and some of them are completely covered. I bent down and picked dates off some of them. Many people have had to leave their homes. Storm fences do little. I any good."

A SHORT A SHIP AND ADMINISTRATION OF THE PARTY OF THE PAR

A ruck was leaving shortly—a big, darts, clumsy-looking or struck. This time the driver and greaser seemed reluctant to take him. A though they finally agreed they did he'r besi to go without him. It turned out that they betieved him to be a French-main, and they distinced the French. When they found that he was American hey became friend, a conce

I was unbearably stifling in the driver's cable. Christopher was completely overcome a one point, and when a mutday stop was made at a large mud-building outpost he staggered inside to the astomashment of the French officer quartered there and lay down on the floor to be at Fortunately, he had recovered by the evening and was able to continue the truck journey.

Tamourasset was reached at last, and here Christopher made one of its emost valuable contacts. This was Protessor Claude Baranguernon is remarkable brenchman who has devoted house't to be ping the Tuareg people. He socceeded it convincing them had education would be useful to them. Then most wisely, he adapted timize it is their had consonra, so that he could help them to get the most from their own natural way if the rather had persuade them to adopt Western habits unstated to their and and traditions.

Barganguemon acteuras Christopher's guide host, and friend while he was Inmanasaet with a sussistance Christopher was also to spend a week at the entainplant of the Tuareg Amenoka. (King) an experience which he found ascending to surregs, weigh the rife is primitive, are a people of great dignity extreme numests, high are agence, and with quite an ancient history to preparation for this visit, him other earn to ride a cannot, a task which he found more difficult than it looks. During his first lesson he was thrown over the animal inhead directimes and once over the rear

It was on this formidable type of transport that he was to combine his Suratin journey. There were no more trucks.

Ba anguernon arranged for one of his most educated pupils, a young Trareg hobic tames Boubaker to act as guide for the first few days of the 1280 at one residences from furningnesses to Toribuxto. The seart was made at dawn. Boubaker and Chris tables each on a cornel, with a third carrying Christopher's supplies of word probabily be without the weeks before the next tripage was reached, so it was expended for him to take enough find and drink to last that time. Our in the burning desert there are not that goes others or a sources soort.

The most difficult and dangerous stage of the journey now had to be endured at began when Christopher was handed over by the leader of a bag caravan it a small group who were willing to go to kidal about 560 knowlettes from I mboken. The The party wo Tuategs a slave and Christopher began by setting out to und a well which was on the route in order to replenish their water-bags. They reached that and it was bone-univ

There was only one tin of food left in Christopher's pack, and the four of them shared the beans it contained. His guides carried no food at all, and very little water. By the time darkness came, Christopher's water-supply was down to one little. At this point twenty large vultures were discovered, and these stood watching the travellers with interest "making up their minds whether they wanted white or dark meat for the meal they were sure they would soon by eating."

The vultures were to be desappointed. The four men went to sleep early a desert custom when travel ers are hunger or thirsty and next morning were still alive. They had just enough water let to make the cup of tea each and then set off for the next waterhold, about five hours distant.

When they reached it, just before the hottest part of the day, they found that this too, he the previous hote was completely dry. The next waterhole was two days away and the travel less how had no ther food not water.

The future looked gram

there was just one chance of surviva. One of the six camels could be killed. The decision was made. Our stopher being usked to put his share of the cost, to which he will agily agreed. Strangely enough as soon as a came, was no ked for the staughter at section, know what was a happen and started scientifing at the tops, fits some

when the victim was killed the liquid in its stomach was caught in a water-hag by the stave. I would be hard to think of a less appetizing drink than the green shifted, like thin brood, produced from this source. I went the Tuanegs made faces as they drank it. Christopher a sold not tackle it purched though he was until the had boiled it under enther he had to hold bis nose while he drank it. Somehow he go: "down Together with the camet's flesh, the unappet ring highed kept then going for another two days."

The region chrough which they were passing was known as the Land of Thirst and Death and the name was well-chosen it was an area not minus for sandstorms as well as for dried-up waterholes. Christopher soon experienced one of them. Shortly after the midday stop on the following day, the camers a Linstinctively turned off their course to the right, making for the nearest depression in the waste of sand. The reason presently became clear to Christopher as the gazed at the horizon.

It was incredible. The duties seemed to be on fire, the peaks were melting away and the whole horizon was changing shape. Then as it started to get dark I heard a sound, ike wind browing through the leaves of a tree."

His companions made signs for him to hide himself behind his camel and cover his head. He did so but the force of the storm when a struck was too great to be avoided. "Even with the came, s body as a shield I could feel the impact of the wall of sand that came streaming along the earth. The wind found even the smallest opening in my crothes, and the

sand felt ike intle needles.

There was nothing he could do but crouch down waiting for the storm in first, while the sand steaming piled up on top of him. He tound himself less ling a mic story that just is schill a sandstorm, many years earlier had completely buried a hige caravan or 1200 came is without leaving a trace of them.

The present storm fortunately was less drast clane lasted only had an hour. But they all had seventy five mild meters of sand completely covering them, and it did not need much imagination to understand how a party could eas. It be hunted and sufficiented

Kroal was the last town on his route before I subukto itse four there were sire over 450 k tometres of grim desert to be crossed. This proved to be the sine lest and miss urduous stage of the whole desert crossing.

The stress of desert travel had affected him physically. Its hand had become so cracked that he could hardly use his camera. To add to his transhes, he could his came time day puress a huge siab of rock on a slight incline. Then he realized that it was covered with timy somes. If a camer fer heavier knocking him of its back, and their ghis was not seed a least of was so shocked and fing nened that he could not ride a for some time, his hadronal line, out foot.

Another little neident served as a consider that the levest has many ways of destroying its victims. Christopher was helping to gether somes to place in the melifor like kettle or partial and on Helpicked op one aspeciable to find a foor-foot crake or indunder a Irlanconed applify and struck but he managed to jump back just in time to avoid the deadly fangs. The guide's slave killed it with a stone indicating by gestures that it was a very possonous speciment.

A day inter he caught his first glimpse or Timbukto. He had reached his gost at last and his journey had taken him across 1200 kilometres of desert

This was the end of his main tourney but it was by no means he end of his adventures. The stay in I robusts had enabled him to recover some of the weight he had tost in the desert, and he was beginning to fee fit and well the experienced a curricus longing to see some more of the stronge and mighty desert before leaving the courtery perhaps longing.

A sudgen decision was made the servate agram to Professor C aude Balanguernon in Tamanrasset, and then flew rapidity eastward by plane pair y across the Lando. Thirsy and Death across which he had so painfully toiled. From Agades he travelled north to meet Balanguernon, partly in a hired jeep with a French Lieutenant, partly by came.

The arrangement was that the Professor would drive south in his seep from Tamanrasset to a well at in Abbangant, where Christopher would war for him of Christopher had not after all teached it by the appointed day, hen Balanguemon would continue south on the primitive road towards Agades.

Informately the carayan with which Christopher was travelling insisted on making a lengthy detour to water their camets at a well, some distance from the road. The American distance on getting back to the road again as soon as possible expressing himse I vigorously to the leader by 5 gas as they could not speak each others language. He by her me they got back to the road two days had been loss.

The comvan presently left the route, but a box acted as a guide to lead Christopher to the west at a Abbangara. It was reached just at rightfall, and the 1-diowing morning the boy went back treating the bristopher along to await the arrival as he supposed of the Professor from the north.

There is no village at In Abbangant. The only by Iding is a bordy, which is a simple most structure consisting of a fool and our waits, with one hole to serve as a window and another to serve as a door. The we his about 275 metres away.

When he reached it he had a shock. There was water there all right that it was a good 46 mestes below, and there was no their rope not bucket.

the returned to the bords and searched his pack. The onto possible container in bring up the water was a small metal teapor, which would carry about half a capital of figure at a sine of a new anti-ed to the handle and the spour plugged up.

A line tier, to the handle but where was the line?

has enting together act the available bits of cord and articles of conting he could at the make only 8 metres. On an inspiration he tore the turban he was wearing into four strips. So the teapor reaches no more than halt-way down the well.

What e self-lis steep ne-bag. No for it was now the winter season, which means that the trigh's were britterly cold, a through the days, by normal standards were still unbearably how without a sleeping-bag or blanker he would freeze to death.

That in gut be lay in his sleeping-bag picturing himself dying of thirst and honger if the Professor and not arrive in the next day or two

he has with him a small recording machine. The notion of death suggested to him that it might be a good idea to record his last thoughts for the benefit of those who found his body. He set was hattery-operated, with this price as the recording medium.

Wuret

If dawned on him suddenly that here was the rupe he needed to teach the water in the well. The wire was very thin little thicker than a human hair but it was about 10.5 metres long. By putting several strands together it should be possible to make a line strong enough to bear the weight of a small teapot ha 1-full of water.

The scheme worked. Seven strands of wire laboriously twisted together just reached conflortably to water-level in the well

The liquid brought up in the teapor was not paracularly invining—it was like a mixture of modatid surphur—but it was drinkable, and it would save him from dying of thirst. He spent the whole morning drawing up porful after porful and was able to co feet five. 23 htres to take back to the bords.

وسيمته مستحقيق بالمستحدث ومعاق بيات

The following evening as he say outside the hords, staring only half-consciously at the horizon he noticed a small sandstorm blowing vague you his carection. Could tobe the dust raised by a Car. No there was bominghold to that

There was indeed too much dust to be taised by a small (eep, but it was a rescue party none the less. Twill by Desert Patron cars came roaring up to the bord), and Death to better try departed.

Canade Basangueroon and a friend arrived a few hours after in the jeep. What had happened was that they had missed meeting Christopher during the on-infunde two-day detour. They had more been in sittrected by a native who the ught's hissopher had returned to Against When they reached Against and discovered the notive serior. Bular gueroon realized that Christopher in 1st have missed them on the road, and that he was primably wanting as In Ahhangarit, where if food Tievers sens his getting such with the Desert Paramand her sent our four tracks to deverthe desert north from Againets and a part charter with Debuggard.

has foresight saved christopher's later and enabled the hindroboking journey across the Saham to end in a return to the floggaring on instead of in a sandy grave in the heart of the desert.

NOTES

Words Explained:

AAAL AN ISAL	ramet.	
quite a task to find		han to tind
gripped	wanderlast	oversome by the eager device in traveling
trans-Sahara		
Journey		across the Sahara
give = lift		take one up into vehicle for part of way
forbade uneventful - vigilant		commanded a person not to do or go
		in which nothing worth men toning happened
		watchful, carefu.
arduous		hard
uncanny		strange
runway		specia is prepared surface in airfie d for planes to take

off from land

56 Employed and the second of the second of

wheels to blie on: to take hold of desperate violent bopeless

grim details: details causing great pain, shocking

pounding thumping, beating lacredible.

onsis: fertile place with water in waste of sand

notoriously had much talked about for had qualrues.

excitements: things which set one in motion or rouse up

distatrous causing great sudden trouble feeling

collapse break down

slekness feel like vomiting blazing sand . bot shining sand

desert-strangle hold desert streng lienge its gap on the tily

triumph. overwine

luxuriant trees : strong in growth

desparate battle for survival highting bard to live and not to die clumsy-looking: badty made, awkward in shape

reluctant: not ready to, unwilling

it turned out : It was found

tingger go with take certain steps as flabout to have a fail

formidable very strong, impressive

adapt himself ... traditions : began to follow their customs

fascinating: charming

primitive; their ife is of an early simple sort, undeveloped

detour: by a roundabout way
grim: severe, fixil of danger
parched: dry for want of drink
instinctively: by a natural impulse
crouch: bend body low in fear

less drastic : less strong in effect stress-travel : hardships of the travel

victim: persons, animals put to death as offering to a god, here

Silvery Serve 1

persons who suffered at the hands of the desert.

Inspiration : sudden bright (dex.

pack: parcel made to be taken on back of man or anima,

A THE R P. LEWIS OF LAND ...

plugged up: something used for stopping hose get stopped with

plug

line. siming

inviting; preasant, which one would like to drink

mirage: effect giving seeming existence to water or frees in a

sand waste

illusion the seeing of a thing when it is not present winking:

get one's eye or eyes open and shull quickly

foresight power of judging about the future

ANSWER THESE QUESTIONS

- I Give an idea of the size of the Sahara. How does it compare with Fing and
- What had Christopher's fostermother to do with his desire in see distant places?
- 3 How did he manage to get a seat in the weapons carmer?
- 4 What was the most noticeable feature of the desert city, named Chardaia?
- 5 How d d they manage to drive the heavy truck in the track ess desert with its soft sand?
- 6 What did the driver of the track ten Christopher about three Englishmen who had attempted to cross the desert?
- 7 O ve an account of the 1 the town, named El Golca, and compare it with In Sa sh, bringing our the difference between the two
- What do you know of Professor Ctaude Balanguemon?
- 9 Describe the events leading to the losling of a came). What sort of water did they get from its stomach?
- .0 Describe the journey through the land of Thirst and Death.
- .) Describe the stay at In Abbangary. How did Christopher manage to get water there?

Pasteur discovered germs, and Lister killed them. These two men logether revolutionized he theory and practice of medicine.

and a Pasteur at French chemist. Incovered that disease was caused by "rying organisms so small but they come not be seen with the naged eye. In cro-organisms, or provides or buckers or gents, the words at mean the same thing cosephic ster anding sharpeon, later orders or he businedness peer, applied Pasteur's o services to surgery.

Since germs are alive germs can be killed. They can be destroyed by hear or potsofied by certain chemicals caded ant septics carbo caucid is one undivar was the germs killer in or used Previous's surgeons had without knowing in teered by put outs on the operating table, with germs, chiefly from their sorgical continents. Lister sterilized by instruments, with germs, chiefly from their sorgical continents. Lister sterilized by instruments as the carboha acid and used carboha, acid to us. the germs on bis lands, or the partents such accessor in the actinities operating-theater. Then he climid carbo partents open without carbon, acid of season.

It we want to was the prevention of disease. The object of los and senter method, as a was enter was a stop gents from getting no the body. The care of assesse was a more difficult problem to here the gents were a ready stands the body certain viney counts to ke add by the same and septic method but it was soon found but a chemical that dest over germs assort formed the cells of the body careeting earths a sort ofto the biody was tried, and quickly abandoned for led dimore have than good lo kell at the germs the dose would have how a he strong enough to kell the patient teat.

was a bacteric ogus, named Metchn kost a pupil of Pasceut who revealed the rue nutrie could be problem. He discovered the body's national announting associated as the leuchovies of white cours of the blood. He showed that when perms enter the hody they are not ed and a asacked by bosis. I subjectly from the whole he grayouthood white rush is pointage of with the header the sold environmenting a bugle-call the showed has a sense was, in fact, a high between the second test and the germs and a tight to the death, for i enued only with the death of the germs or the death of the patient.

Carbolic acid and a. the other known antisepties did more comage to the eucocytes than to the germs. The problem was to find something that would attack only the germs and to help, not destroy, the lighting leucocytes.

he problem was still unsolved in 1906, when Alexander Fleming passed the finals if his medical examination and wined the staff of the Inoculation Department of St. Mary's Hospital Paddington

A exander Fleming was born on a farm near Darvel, in Ayrshire on August 6, 1881. He was the youngest of a family of eight this faither died when he was seven years old, and his eldest brother. Hugh, took over the management of the farm. Alexander was then sill going to the village school. At ten he want to Darve' School, and staved the was two ve. That was the age-timit. The question was then discussed whether he should continue his education or go back to the land. It was decided to keep him as school, and he went to Kilmarnock Academy. At fourteen he went to London, and for the next two years he studied at the Regent Street Polytechnic.

Three of her brothers were already in London when he arrived. One of them, Thomas had studied ment, he at Olasgow aniversmy and was a qualified ocalist. Two others hecunic opticians. And book in Scotland one of his sisters married a Darve, due at and another a veteriously surgeon. The fremings, born on the land, were becoming a moderal family. But when Alexander left the Polytechous at statem, he was to take a job as a clerk, is a shapping from in leader-half Street. There was not enough mones for him, o study, or a profession or trade.

Fle tung worked in Leaden-hall Street for four years. Then, at twenty, he received a share in a legacy. It was not large, but enough for him to truth for a cazeer with hetter prospects. Firs brother Thomas was then in Harley Street, and according to I letting it must be My brother Phomas pushed me into theory in

There were twelve med an schools in London and Herning sciew not ring about any other. It chose S. Mary's fer no better reason than that he had played water-two ago not the Hospital team.

In eight years been now worked in Wright's laboratory, for eight years he sought to find a monte to the leukocytes in their high against as adong business. Then in 9-4 he is ned the RAMC and come face to face with one of the montened call problems of the First World War the treatment of infected wounds.

By 1914 I exter's anoseptic method of surgers had been largely replaced by what was used to stend or instruments, cloth again other operating-diesare equipment. The purpose was the same to prevent germs from going into the wound in peace-time this was adequate for most surgical cases, but in the treatment of war wounds prevention was not enough. In nearly every case the wound was infected before treatment cours be begun. Thus the surgeon's problem was the same as hat of a physician treating a snase the had in try to kit, the germs without damaging the leucocytes that were phrendy fighting against them.

There was no tolution—and the problem was tremendous. For the first time of worfare high explosives were used extensively, and wounds that were not infected were rare udged. The surgeons were unprepared. Thanks to the antiseptic and aseptic methods, infection in surgice cases had become the exception instead of the rule, now it was the other

way about warm. We have in this war gone back to all the septic infections of the Middle Ages, said the Director General of the Army Medical Service.

Medical officers treated intered wounds by the only method they knew, with chemical anaseptics. They applied carbotic acid todare and other chemicals to open wounds in an attempt to destroy as many germs as possible. They could not destroy at the germs, but thought that it on a supple were known did be better than none.

Meanwhile Fierring a medical officer himself was soll working with his old which's TAIn roth wright had been made a tildonel in the Army Medica. Service and had set up a research abortions at Boulogne. There with his help of Flerning, he set to work to tackle he problem of wound infection.

Whight and from not becovered that the treatment being used was doing more harm than good it ach of the chemical antiseptics was more harmful to the reduced estimation the gents a grow and that the antiseptic act and helped the germs a grow and that the written was basically wrong that the surgeous's quit stoudd be to be it such to kill the germs with an ownside agent as to help the rescueytes to their natural germs-killing work.

Expertments were more with different chemicals, and me after another became ashumable another gave was to the next. And at the end of the War, which had a fee about seven to 1, or men the problem was still many sed.

Freming new hirty-seven were back to St. Mary's and continued research. And in 922 how workered an antisept common a homeost like earthouse no dibut a natural air respire munufactured by the body.

He made he discovery by what he modestly called an accident. He was suffering from eathers and began to exam so his own hasal secretions. In these secretions he a scovereum substance the desire sed must be so the collections the He called a service.

a servery was a because rape of a servery was decreased and the servery was a been servery was a been superable importance for it was the international dependence for it is international dependence for its international depidence for its international dependence for its international de

Lyservette was not a chemical but a natural antiseptic and unlike chemical antisepties, it described germs and yet had no harmful effect in the eur sextes, it was in fuction the first analysis a discovered that was harmfless. The cells of the body

Penicill n was the second

The discovery of viscovery did not bring Flenting popular fame, but it raised his position in the world of science. The medical profession began in pay more attention to what he said and at this time be had quite a lot to say on the subject that had occupied his mindlever since the First World War. Chemical antisepties were fashionable again, and Flenting once more reminded doctors of the greater importance of the natural defences of the body.

In 1978 F eming was appointed Professor of Bacteriology in the University of

London and in the same year be "hit op" penicilan. The phrase in his own. The very first stage in the discovery—he says, "was due to a stroke of good fortune. But only the first stage.

a British Salar and Salar Andrew St. Telegraphy (1994) (1994)

In his abordiory at St. Mary side was carrying out a sense of experiments on the common germ called staphy occords. He was growing counties of the germs on pintes sprend with again. The plates were kept covered, but to examine them under a micro-scope he had to axe the covers off. As soon as you open a culture plate. He said afterwards. "You one asking for quable. Things drop from the air. One or show hits of trouble happened to be penied in Amount spore coming from I don't know where dropped on the plate.

Presumably the spore of the mould or langua, was blown in through the window. I may have come from the larder of a forgettu. Paddington housewife — for this particular micro-allianiants by breeds on camp bread cheese, and preserves. It go was beso when the conditions are about and damp and the summer of 1978 was nerviced lamp.

Having settles, in the culture plate, the mould began to grow. And somestiat once the interrubes round it began to disappear.

h emany me assite the work he was doing and began to investigate—le made a pure capture of the model, and fried its effect on other bacteria. Some grew right up a it others, like the staphylocologic stopped short, inhibited by is antibacterial action.

The next step was in produce the anti-bacterial substance free of the mound over the Grantis by plannig the minimum a meat broth. It grew on the surface as a felt-like mass, and arried the brain well sw. After a week's growth the flord was strained brough a fine filter and tested it is as any shapterial properties. The results were as taxonizable as be one and demang know and he has one seried another natural and septic with far greater prostly. Les has lysozyme. He enfled it penterthin.

penise in was about three times as strong as carbonic acid and at the other che men ant septies it had in accu effect at all on eucocytes. Theoretically it tooked the an identification the mean septies that had been sought ever since Pasteur discovered germs. In procince there was one big obstacle in its crude form peniculity was abstable and it could not be used in the treatment of disease artifactors was found of concentrating it.

That was a chemis, such and fileming was a bacteriologist. He area to concentrate the drug, but failed. He lacked both the training and the equipment needed for the job. He published his findings, and continued to proclaim his faith in penicill in, and he kept his ongoing only to care of the mould. It can be seen today dried up but shift recognizable, in a prace of honour in the Maseum of the Medical School of St. Mary's Hospital.

So a seemed that period in was, the lysozyme, just another laboratory success. And regretfully Freming turned to other things.

Meanwhile a fresh attempt had been begun to tolve the problem of concentrating period in It was made at Oxford by a learn readed by Professor now Sire Howard Plorey and Dr. E. B. Chain.

The Oxford earning aded trained chemists as well as bacteriologists, and had all the equipment that Flerning had lathed send was a long hard singigle before they succeeded a producing a practical concentration in perceit in The first human cases were treated in 1941 and the problem then became a matter of production. One of the Oxford team were to Americal where new methods of monoclastic were discovered, and in 1943 perceiting the reached the Fighth Arms in Egypt. In the words of Viscount Miningianery of Alamein, "The healing of was wounds was revolutionarized. Perceit in arroyed tust in time to save count essible view feweress is the situations weapon serviced in the light against disease.

While pend it in was being he led as a wander drug the name of its discoverer was hardly known into up he men a protession. Then see Almooth Wingh, wrote a letter to be firmes for higher wild who had made the discovery. And he may become amous

Le was kinghred in 1944 and awanted the Nobel Prize for Medicine in 1945. Covernment and inversational lower the world showered him with honours. He had to rever widely attend functions make speculies, received thanks—other personal expressions of grait dide from people who owned their lives to his discovery to let vionee at a medical gardening an unsure on many in short-steep as pushed in positional less three chardren forward to reach Florang.—There is higher are a recorded they owe into a significant pointing to lead to the higher are a recorded to ask to add in a over prayer to higher small.

But here he nemicisted that such granted was not due to him. If verywhere I go people thank me to saving their lives he said. I don't know why they do it. I didn't dearly he had been kespend. In I was long to be was not a strongesty that nade him say his it was presupement of his heat on power of hat are to protested vigorously apparent the idea that pend. I make a more mode invention. That observe it could not need to pend to make a did have done that had not not form of a lowly vegetable has been making for himshords of years. I mily discovered to And a ways he has sted that he discovered it by chance.

Happy is he who a reads be onged to history in his own I feet me " said I oro-Moran, referring to F eming, but Florring was not happy in the limelight. "I am a simple bacteriolog at the said and his soon as he could stip away he went back to his laboratory at St. Mary's and got back to work.

The Americans visited the laboratory and were amazed. One said it was "like the backroom of an ord-fashioned drug store. He found it hard to believe that penies his could have been discontract freming laughed, and in Detroit, where he was shown over the last world in received inhurstones. In present a piears ag, dissiless, autenial language for received to be shown over the sanctum.

discovered in a lab like this." When they saw the point they could not deny it. Their culture plates were never contaminated, for the air was too pure, there was no way in for spores of a common mould.

Fleming's achievement was not only the discovery of penicilin. As the Surgeon-General of the United States Forces said, "Fleming, like Pasteur has opened up a whole new world of science." He founded the antibiotic—that is, growth inhibiting treatment of disease. He provoked others to seek new antibiotics, and all research-workers to be on the lookout for them, particularly in moulds and fungi, and out of these researches, which but for Fleming would not have been started came new drugs, made by nature and a last discovered by man, of which the best known at present is streptomycin. Fleming himse frequired this as the most important result of his work, byen before penicillar was in general use, he said "The greatest benefit penic that has conferred is not to the drug itself but the fact that its discovery has stimulated new research to find something better."

Sir Alexander Fleming died in 1955 at the age of seventy-three. His work will never the.

NOTES

Words Explained:

revolutionize: make complete change in something

theory : reasoned view of what may be the cause of relation between facts

or events

peer to Breash society, a man of high inherited cank (d) ke, ear button.

elc)

infection! giving of disease through atmosphere of water

aterillee . make free from histing bacteria

nhandon : give up

reveal : give knowledge

armour. metal cover for body

boots: great number of

lwvade. go into a country or body to make awark

polytechnic . school teaching a number of different trades

oculist: a specialist in treating eye disorders

optician: maker or trader in optical instruments

profession: way of making living specially in law, sergy, medicine and

teaching

legacy money etc given by owner at his death

prespects expectations, hopes

research - work done with a view to discovering of new facts

vaccine poison produced in body by the disease of cows like smallpox

therapy medical treatment

tremendous very great

explosives with tendency to go off with great noise

exception thing that does not follow the rule

middle ages: about the years 1000 - [400]

multiply grapple with

modests not over-valuing enese finot petting eneself forward enterth a sensed condition of threat or back of nose as in cold

forerunner one can be before another in history making the way ready for

enforces groups of animals living together

model word he grown of Engi formed on wet things

tpore I sing and by which plant without flower is produced

funder store-room, cupboard for food

preserves substances kept from going back specially food

broth thin meat soup

erude, substances a natiral condition on worked

concentrate: necessa strength of squids by reducing volume

regret (and feel high caused by having done or not done comething

lank t not having enough of be without

hard t salute or greet

protect : make a alement no ming our what a wrong

limelight: year bright got in the lane got gerting rub contention

last word he ster in best example the best view about

nir-conditioned; room or the bursains having the air in ill brough, to a stundard

temperature

sanctum holy place a person private morn of a

contaminate make unclean or diseased

provoke make angry

stimulate: rouse to activity or excite to action

ANSWER THESE QUESTIONS

- . What are antiseptics and what is the antiseptic method?
- 2 What was the chief defect of antiseptic method?
- 3 What part is played by the white cells in the blood of a human body?
- 4. Give an account of the early Life of Freining
- 5. Describe how Fleming discovered pents. Ilia
- In what respect is penicil in better than the chemical antiseptics?
- 7 What do you know of the Oxford team?
- 8 How did they make penses his more effective?
- 9 Write a note on penici sin as a wonder drug
- 6 Was Fleming proud of his discovery?
- .1 Why couldn't person have been discovered in the research aboratories of America?
- 12 Fleming's achievement poved the way for other discoveries in the measure field. What are they?

LOUIS PASTEUR

Posted was berning to humble conditioned. Dole in the similatoric of France in 1827. It is after as a soung man had been one of Napoleon's conscripts and had won the Cross of the Legion of Honor aron the held of had of for valour and floodity. Thus the son was fortunated in possessing fortbears of character and strength. There is much evidence of the inflormed of the interior that son. Pasteur showing time after time the strength of his devotion to the law points of a patriot than of a scientist eight of his devotion to the law won to the law points of a patriot than of a scientist eight of his devotion appears with the National Guard and seeing the latter. Place to have the recorded himself in the National Guard and seeing the latter. Place to have been sone to a scholar and the latter won to the latter promptly pinces on the latter to have a find the first of was on the verge of war with Germany to find a first of the latter of the party and was exceedingly disappointed when the right item was the form that has figurely without the charter of the party and was exceedingly disappointed when the right item was a classification of the score that has figurally author the classification of the score that has figurally author the classification and the Nation. Classification the score that has figurally author the classification and the Nation. Classification the score that has figurally author the classification and the Nation. Classification the score that has figurally work as well as everbeline.)

I must be a form where his tather he has small tarm its and here Pasteut was sent a school be to make the same his tather he has small tarm its and here Pasteut was sent a school be to make the where at the showed in inverest whatever in brooks in study he device the sent in the order of his companions. He ever directly a grasped the fact door his education was a great drain on the family time, he set his color directly a contest of school and some developed the passing the work which marked the whole of the rest of heat fe

The integer a Arbon did not teach philosophy and so after a time. Parteur into on to Besaucin, a bigger place with better educational provision. Here he graduated in Science and Artifand was given a position the College Staff.

He was a ready much interested in them stry too much so for the processor of that subject at Besancon, whom Pasteur used to embarrass with unanswerable questions—he Professor in question disapproved of saving "I don't know—and used to try to keep Pasteur "in his piace" by reining him that questions were to be asked by the Teacher of the Scholar and not vice yersa.

In 842, i.e., when he was twenty he went in for the entrance examination to the great Foole Normale in Paris and came out fourteenth on the list, whereupon he refused to once being so disappointed at not getting a higher place. He took the examination again in the following year and was for the matter ast, which apparently more or less satisfied him.

At this point one may say a word about his private affairs. In 1848 at the age of twenty-six he became Deputy Professor of Chemistry in the university of Strasburg and here he met his future wife, who was the daughter of the Rector of the birasburg Academy. They were married to 1850, and it seems that Pasteur was so buried in his work on the wedding day that he entirely forgot the ceremions and had to be tetched by a friend. The marriage, however, was extremely happy, and the wife seems to have been an important factor in her husband's work.

in .860, the French Academy offered a prize for the solution of the problem whether spontaneous generation was or was not a fact, and Pasteur entered for the competition, and tettled the matter once and for al. in the negative proving that if a substance be sufficiently bented to destroy all fe and if the air in contact with it be hitered, so that it is free of germs, then the substance does not after i.e. bacteria do not develop in it. As asual, his opponents said they had obtained uppos to results, so Pasteur asked for arbitration, and the Academy appointed a Commission, before which Pasteur and his adversaries were to repeat their experiments. On the appointment day Pasteur appeared loaded with apparatus. His opponents, however had none, they said the weather was unfavourable and they would like to wait. The Commission very reasonably refused. Pasteur did his experiment successfully. and won the prize. In the course of these experiments Pasieur found that some gertus are very difficult to destroy by heat, e.g. milk developed bacteria even after several minutes, boiling, by after raising the temperature. "It above boiling point he found hat me bectern were left able. This work on spontaneous generation was of great value because it stimulated other ac put six to study the habits of germs, and much of our modern knowledge of these, avisible havery active plants spring from Pasteur's discovener

This brings us on to 1870 when France and Germany were planged into war and Pasticur ever intensely a lover of France was filled with sorrow and anxiety and with loading of Cermany, he wrote to the University of Borm, which had bestowed on him the degree of Doctor of Medicine, asking that his name should be removed from the Faculty of the Linversity and returning his diploma, of which he speaks thus -

"Today the sight of the part anent is odious to me, and I feel offended at seeing thy name. I need under the patronage of a name doomed henceforward to executation by my country, that of Rex Guile mus.

Having offered himself as a sordier where now he was refused on the score of physical incapacity this anconquerable man turned to the sword of Science and took up the study of brewing, in order to discuver a method whereby if rance might produce beer as good as that manufactured in Germany. He imparted his discovenes to the ting ish brewers as well as to the French, with the rather aluminating temark. We must make some friends for our beloved France. In 1876 this work was published in a book called. Etudes sur in Biere." which has been translated into English and is the best known of Pasteur's books in England,

where it has been of tremendous value in the brewing industry. Huxley once said that Pasteur's work on termentation alone saved I rance more than enough to pay the Indemnity of the Franco-German War

However Pasteur's work on fermentation did not stop short here, it had far more reportant effects on medicine surgery and public health, for it was the staring-point for Lord Lister's work on inflammation of wounds, which in those days caused endless trouble after operations often making amputation necessary and frequently even this was not enough to save the parent's the About 33% of Jeaths from major operations occurred in pre-Lister an days, with the result that surgeans were unwilling to operate except as a last and desporate tesori.

Now Pasteur's discovery that fermentation was due to bacteria set Lister wondering whether inflammation was not also a type of fermenation due to bacteria getting into the wound. And as the result of a series of brill ant researches he proved that this was to, and that, if only germs were excluded from wounds, inflammation was averted

The appropriate method in surgery has led on to the aseptic method of roday, where the iden is to keep the petient's skin free from germs, so that the issing toxsues need not be soaked n curbo ic which tends to destroy the tissue as well as the germ. Hence though the runging and the doctor's hands and everything case are rigorously disinferred. The would a not hus treated, incess it he an old wound already infected. The enormous value of this work a shown by the fact that the death-rate today in major operations has fallen to about 19/0

To return to Pasteor the schiesement by which he is best known to the man in the street vizin is work on disease was led up to by an investigation into which he was a most fireed by the French Government. This was the test, tief a mysterious epidemic of statworth diseases which for fifteen or watern years had been devastating the silk-industry in the South of France Now the keeping of sakworms was one of the able home-industries of the beasantry of the part of France Practically every family set uside the best room in the house or the rearring and tending of a flaworms, the women got up even during the high to supply the worms with fresh musberry seaves and to see that the temperature of the room was just right and in that region the common greeting on meeting a friend is said to be not "How do you do "but how are your silkworms doing "

Lint . 849 the industry had flourished consistently, but in .849 the moths were attacked by disease. It was thought at first that the eggs were a fault, and fresh ones were brought from other countries and for one season, this cured the disease, but it reappeared in the first generating of descendants of these imported worms, and so the inhabitants were driven to import fresh eggs each year Soon, however, the disease spread to neighbouring. countries, and I Japan was the only si k-producing country free from the disease. This reduced the silk growers to despair thousands of families were faced with rule, and things

were so serious that in 1865 the Government asked Pasteur to investigate the disease. A first he refused, on the ground that he was a chemist and not a naturalist and had never louched a stikworm in his life but he piceded ignorance in vain. So much the better replied M. Dumas, who bore the message from the Government, you will only have the deas which come to you from your own observation. This coupled with his sympathy for the people of the devastated region, overcame his relicitance, and he set out for Alacs, a town or the stability district.

Market Control of the Control of the

Now earner observers had noted microscopic grains or a inpuscles in the bodies of the diseased worms, but nobody had succeeded in finding a remedy unit. Pasteur suggested collecting the eggs, laid by each moth separate vanid only keeping those derived from healthy parents. The only way in which this could be done was by use of the microscope and Pasteur realized that this instrument would be a strange and terrifying thing in the peasures. So he tried to reassure them by telling them that this utility of eight vents oid was quite at home with it in admittant, he directed the sifkworm reasons aftern onto the need having over-crowding, unscream ness, over-healing, and unnealthy could not a generally, since these weakened he useds and made them more table to the a sease.

This treatment, though it was not at once adopted was very successful it acc cusing the epidemic. It has been estimated that before Pasteur came to the rescue. France had took forty million france through at aworm disease. An even more important result of line with was that it ad Pasteur on to study the infectious diseases of the higher at this is no one again.

It was during his work on the silkworm that Pasteur suffered from a struke—the physical effects of which he never shook off. It has been attributed to overwork on the silk problem Providentially however his mind was not injured, and in 187—at the age of filter five he began to study the cattle-disease named Anthrax. It had an early heen suggested the this was due to a germ, and Pasteur finally proved the truth in this heart and further worked out preventive treatment. He cultivated the anthrax bacillas in such a way that it became only mild in possonous and proved that these weakened germs introduced into an animal a bidoc gave rise to only a ghi sympt. It is distillated and protected the animal from taking the deadly forth, much in the same way as vacculation prevents smallpox. This protective treatment has safeguarded in some of sheep and cattle from the disease. Reports from I range and dangery show that on many farms the death-rate from anthrax has falten from I range and dangery show that on many farms the death-rate from anthrax has falten from 19% to 19% among stattle.

And this brings as to the next stage of Pasteur's work—and or human diseases. Overcoming his distake of seeing suffering, he visited hospitals, collecting infectious matter from patients, examining it microscopically and identifying the germs associated with various diseases, e.g. at the time the Materian Hospitals were deviasated by puriperal fever in every country, and an appailing number of women died from the disease. Pasteur

discovered its germ, and an interesting little episode is recorded by M. Roux in connection with the discovery. One day at a discussion on puerperal fever which was taking place at the Academy of Medicine, while one of the most distinguished authorities was etoquently descanting on the causes of epidemics of this disease at Materiaty Hospitais, he was sudden violat nupted by Pasieur as follows - it is nothing of it, that which causes the epidemic is the doctor and his belongings which carry the germs from diseased to the healthy woman. And when the speaker replied (with the superiority which we can all imagine) that he was afraid they would never discover that microbe. Pasteur nushed to the black-board and drew the germ, saying. "Stop, here is its picture." Nowadays, thanks to Pasteur and, later epidemics of this disease in Materialy Hospitais are unknown.

We now come to how he discovered the method of making vaccines, i.e. weakened germs, which can be inocurated in measured quantities into human beings as a cure or preventive of the discase caused by the ordinary un-weakened germ.

He had gone away from his laboratory for a holiday in 879 whilst working at fowecholera, and an his return found at his custivations of the germs dead or dying. He proceeded in mocu ate various birds with those dead or dying germs and found that the birds showed signs of these but recovered. The idea then occurred to him of inocusating them with a fresh tot of virtuent germs of chicken-cholera, and he was amazed at the result with that the birds story resisted the disease though others, which had not been previously dosed with the exhausted germs died. So he arrived at the method of attenuating germs, i.e. of custivating them no that they were weakened, and also at the fact that such germs inoculated into a hearthy animal produced a mind type of liness which protected the animal from attack by the virulent form of the disease.

The first human disease to which Pasteur applied inocustion was Hydrophobia or Rabies, the hombies hess produced by the bite of a Madi dog. To give one some idea of its homors, one need on viread such descriptions as the following of a child of five, admitted to a French Hospita. "The unfortunate interpretation presented as, the characteristics of hydrophobia spasms restlessoess, shudders at the least breath of air an airdear thirst accompanied with an absolute impossibility of swallowing convulsive movements, fits of furious rage. The child died after twenty-four hours of hombie suffering suffocated by the muchs which filled the mouth." As a matter of fact, its germ has never been found, but it was known that the part of the body affected in hydrophobia was the nervous tissue, and Pasteur tried taking some of he nervous tissue of an animal which had died of the disease and attenuating it, which he found could be done by exposing the spinal cord of ribid rabbits to dry air which we accord it and after fouriern days it was farmless. The attenuated spinal cord introduced into dogs rendered them immune to hydrophobia, but the treatment was not tried on human beings to 1885, when a boy. Joseph Meister was brought to Paris for treatment from a utile place in Alsace. He had been bitten by a mad dog two days before

Now, human beings do not as a rule develop by drophobia for a month or so after being differing and Pasteur, being as usual extremely anxious to ward off suffering, undertook the treatment of the boy by inoculations, which were continued for ten days. Meanwhile the boy was hardly if at all and prayed about the laboratory very happily though Pasteur was devoured by fears and anxiety about the results. However, the boy was absolutely cured, and two months later a shepherd, who had been bitten by a mad dog, was similarly cured, and three months later three humared and fifty cases had been treated, with only one death. By 1899, more than twenty three thousand people had undergone the treatment, and the number today must be sarger such. The deaths amongst these were less than $\frac{1}{2}$, and there is no doubt that many of the rest were saved from a terrible death by Pasteur's work.

But though this was the last of Pasteur's great discoveries, its results were by no means confined to the cure of hydrophobia, for the fame of his success stirred up other scientists to try similar between 1880 and 1890 they discovered the germs of consumption, diphtheria, typhoid, lock-jaw cholera, and Malta fever

In 1893 the ani-toxin which cures diphthens was discovered, and also the protective trentment for choicin. Before the discovery of the ant toxin 30.4% of diphthens patients died; now 8.1% die in .894-95 the germs of plague and of the tsetse-fly disease or animus were found in 1896-97 the protective inoculation treatments for typhoid and plague were discovered with the result that in Great War there was extraordinarily little typhoid in our Army compared with the amount of the disease which had occurred in earlier campaigns, such as the Boer War in India during [913-93% of the British garrison were noculated, and deaths from typhoid fell from usual 300 - 600 to only 20.

In 1898 900 it was proved that mataria and yellow fever were conveyed by mosquitoes. Now mataria each year kills millions of men and weakens millions more. It was rampar in England, under the name of ague this comparatively recently it was banished by draining the mataria districts. Now that we know the cause of the disease we can fight it in two ways by destroying the breeding-places of the mosquito and by protecting run from the bite of the mosquito. Thus, every puddle of standing water, every pond, etc., should be drained or offed, and all disterns and wells should be kept closed in a mataria, district, for the mosquito lays its eggs in water. Windows and doors must have wire-gauze shutters. Beds must be protected by mosquito nets. Finally, quintie is invaluable as a preventative and cure. It was this knowledge that enabled the Americans to construct the Panama canal, after the French had fused hopelessly with enormous loss of life and money owing to the ravages of malasta and yellow fever.

In .903 - 05 Bruce showed that sleeping-sickness, which devastates Centra. Africa, was conveyed by a species of tsetse-fly. In 1905 in Uganda it caused 8,303 deaths. In 1910 the number was reduced to 1,546

It is impossible even to catalogue the list of the medical discovenes which have

sprung from Pasteur's work and especially since the Great World War, which forced us to dea, with many hitherto little-known diseases and conditions and so to greatly increase our knowledge of them. For example, at the beginning of War tetanus lock law was memendously common amongst our wounded because the soil of Be gium and Northern France is fair of the germs of the disease, hence arose the custom of giving every wounded man a dose of anti-tetanus scrum, which reduced the number of cases of tetanus to a titly proportion.

As an expression of world gratitude, the Pasteur Institute was built in Paris with subscript one which came from an parts of the world. It was opened in KKK, and was the joy of Pasteur's few remaining years.

It had been well said that Pasteur "brought the facts of disease and death from the realm of the supernature and miraculous into the realm of the natural Disease and death were the great my steries, where the occult held sway. The malign and my sterious influence of the milion caused lineary there was the evil eve with its morb fit powers. In fever and in epilipsy the body was possessed by demans, subcreations was the King size I, to be cored by the "Severeign touch." Far more than all other men. Pasteur about the distributions."

Pastour died in 1895 at the age of sevents -three and was huned in the institute

NOTES

Words Explained:

conscript man taken into military forces by law

valour bravery

fidelity loyalty, being true to

forbears persons earlier in family line ancestors

altar, structure in which offer ags are made to higher powers

upheave put in difficulty

verge of war near war on the score : because of

paralytic. one having paralysis, loss of feeling or power of mut an

caused by damage to nerves

sketching: quickly done picture

directly straightaway

keep him in his place : check him, soub him

vice versu the other way round

English 12

by path: studies not in his own line, but near it

spontaneous generation : production of living from non-living matter as inferred

from appearance of tife, due in fact to bacteria in some

infusions

adversary , person acting against one

greeration: curren

Inflammation of wounds : swelling, pain and redness

emputation , cutting of pan of body

last report : tast step or measure or thing to be done

avert : keep off danger

rigorously . keeping narrowly to rules, here most carefully

man in the street : ordinary man flourish . Orive, prosper

insport . take in goods etc. from another country

at home with it ! knows how to use it

liable : tendency to catch the disease

epidemic: disease generally among a group at a time

revene: get person out of danger appalling . causing fear or shock

episode : event, occurrence

authorities experts

maternity buspital hospital for women during confinement

exhausted weakened

apitama audden stolent attack of pain

ardent thirst . huming thirst

suffocate. trouble in breathing, put to death by stopping breathing

mucus ! thick liquid produced inside nose of mouth

devoured by fear : subject to great fear

conveyed by mosquitoes : carned by mosquitoes

rampant : raging, spreading quickly
puddle : small hollow full of duty water

ravages destructive effects of

mystery events or acts the cause of which is not known

occult

those who have secret knowledge

supernatural:

due to some agency above the forces of nature, miraculous

events tooked on as caused by other than natural powers

mullign :

had

mency:

madness

morbide :

couring disease

king's evil ... sovereign touch " scrothia. The belief that it could be cured by king's touch

ANSWER THESE QUESTIONS

Describe the early life of Passeur

- 2 Give some instances of Pasteur's patriotism.
- What do we mean by spontaneous generation?
- 4 How did Pasteur prove that spontaneous generation was not a fact?
- 5 Describe the importance and popularity of the silkworm industry in France. What heip did Pasteur render in outing the silkworm disease in his country?
- 6 How did Pasteur discover the treatment for the cattle disease. Anthrax?
- 7 How did Pasteur discover the method of making vaccines?
- 8 vo an account or residents treatment of Hydrophobia and how he cured the first patient suffering from it.
- 9 How did Pasteur show the way to other scientists? Give an account of the discoveries.

The war was over Throughout the entire Near and Middle East the armies of the democracies had been haired not so much as conquerors, but as deliverers. The Turks themse was were only too glad to be able to lay down arms after almost continuous fighting since. 9.1 A government formed from the old I therats was in power in Islanda, its members and the Padishab himself alike eager to collaborate with the Albies their conception of the best interests of the nation was that of lovally to the Armistice and co-operation with the occupying forces of the conquerors. At Islandal the old British I imbassly was now the Hr tish (ligh C immission supported by roll ary and have detachments. A field officers were supervising the police and the ports and he normal machinery of the government was practically superseduce by index and suggestions from the Alice.

At this time far away in Eastern Analo in, one K vazim Karabekar with some undefeated remnants of the Ottoman Army began to obstruct the A led control. Hivers, tetas up to disband his men. Week by week bittle encounters increased in was upparent that the lurks were steadily growing bolder. Even in the sareets. If Analysh how is the riben inglichanged. This consecution at on not only among the Alies but to Istanbul, self. Some one must go as the representative. The Pad shab and deal with the situation in the spot, a strong capable soldier was wanted. Every indication seemed to point to one man us being sonable for the will and Afastala Karia, was the man. At birst the strost I git from use men demotred, by his objections were the otice overmised, and Mastala Karia was red in the 15° of Max. If I for the north-east coast of Anatolia as two errors General of the I unterm President Scarce y has the small steamer bearing Mos as Kama entered the Black. Sea than the authorities of Istanbul became suspicious of his intentions and issued orders or the ship to be intercepted. But it was too late.

The very same day if became clear beyond all doubt that the Allies had condemned the Ottoman Empire to be partitioned to the very waits of Islambul. On the 15° of May, the Admira of the Hurish Mediterranean Freet informed the Ottoman governor of Izmir that this great scaport and the rich province of Aydin were to be occupied by the Greeks. The Ottoman troups were hierardly withdrawn into barracks and the Greek Metropolitan ruised the Cross as the first Greek soldiers disembarked.

To all Turkish patriots these events meant that there was only one pouce to be pursued. Even those most friendly to the Alites were infurated by this foreign occupation of the richest and most essentially Turkish of their provinces. Turkish patriotism was no longer vague and undecided, it was a flame burning in the hearts of men and women of all classes—a flame of indignation not of hatred. Even during cruel wars the Turks and the Greeks never

based at heather and among the Greeks there was little enthusiasm for the Anatonian adventure Amagnitheent Greek Royansi officer. To some Metacas in protested strongly to his Government, but the invasion continued.

In a heavy storm Mustafa Kamal's small ship staggered towards the landing stage at Somson on the coast of Anatol a. At Amisa he met An haut the commander of a small army corps centred on Ankara, and at a secret meeting of the patriots he sketched out his p an of resistance. First of all, guerilla bands must held up the Greeks, and covered by these programs the patriots must but dup the National army, but without any help from Mehmet IV or any one at stanbu. As the Soltan and the Cenum. Government are in enemy hands we must set up some temporary government in Anatona." he continued. "A congress of desegates to represent the real free Turkey should be called as quickly as possible." Meanwhile Mustafa Nama, set out to tour the villages preaching resistance and in every place appointing representatives to form centres of patriotic review. Yet even the energy and personal to of Mustafa Kamal would not have been so effective had not news arrived that the Orecks were advancing Everywhere the local Turks vowed that death was preferable to rule by Greeks Moreover, the Alices who had made these plans were far away white near at hand was an undisbanded Turkish army corps at Divarbekit. Men came crowding back to the tripks with guits and aminum tion raided from the Alicelarms dumps.

As soon as Mehmet heard of these acts, they he ordered Mustafa Kamal to return The patriot's reply was a one personal te ogram to the Padishab areing him, as leader of his people to come over to Anamy a and himself take the lead against the Circeks and ni the foreign enemies. It would be Mehmet's last change to save himself the Throtte of his fore-fathers and the Turkish nation. But Mehmet's conception of the best interests of Turkey was co-operation with the powerful conquerors to these circumstances the only imaginable reply to Mustafa Kamala the taken was a peremptory command, the rebell must report himself immediately to laterally. Back a ong the wire went the most momentum diegram in the history of the Ottoman Empire.

I shall stay in Anatolia until the nation has won its Independence

Mehmet IV could see no other way to regain the provinces of Anatonia for the throne than by subjectly. With a sudden movement he interspectedly proclaimed himse I willing to summon a government pleasing to the National sets. The delegates in Anatolia could transfer their activities to istanbuil put Mustafa Kamalis, deas into practice and verific longer stand in opposition to the Pad shah, the Shadow of God. The patriots, who could scarcely magine their state without a Suhan as its head sooner or rater grasped at these promises. In most at but Mustafa Kamalitumse I who fought hard for a part oment in Anatolia. He suggested that should set in the upland sown of Ankaral where it would be centrally situated, we a protected, free absolutely independent of the Albes in a thoroughly Turkish town associated.

with the fastory of the Turks and heir forefathers. But for once he was defeated and Musiafu

Kamal was left atmost alone when on the 19" of January, 1920, the National Assembly assembled in the "City of the Sultan" and began the hopeless task of trying to work up teastance under the very eyes, and guas, of the Allies

and the second second second second

While the detegates were wasting their time on the Bosphorus. Mustafa Kamat was making exceptionally good use of the freedom which the absence of the talkers had given him, but the next few weeks Afried agents were kept busy reporting large armed formations seen in the interior regular troops of the old Imperial army, armed peasants, women transporting ammunitions and supplies as Turkish women had done in the days before islan. The position was becoming really senious for the Ailied Army of Occupation stationed here and there near the coast. In her diary, an American medical practitioner chronicled the dairy deterioration of the position in Anatol a

"The firing gets worse steadily—a general massacre of the Armenians is expected A in ght along the skiet are red-lighted in even direction by the raging free, and he satisfies room and the heavens shake—The whole city is overheing with clouds of smoke. The Turks are bolder att the time. Surely this is because they realize that this is the end for them and are desporate."

Every day brought freshmen and new equipment. The Alter began to withdraw their groups from the interior. They evacuated the important Baghdad Ris way anction at a Krishehir where introductely the potnots transformed the ris way depots implantion at autories. The Alice replied by putting Islanbul under a collective arrest and assetsing the bias onal Assembly." Leading Patriots hid or escaped into Anatolia where they made at aight or Ankarato join Musicala Kamal. There on the 23- of April 1920 the revolutionary Turk shid Grand National Assembly met with Musicala Kamal as President. Its first set was to make dear to the world the portion of the new Turk shidovernment. The courage of its words is distorational.

"The Grand National Assembly sitting in Ankara will preside over the deathy of Turkey as long as the capital is in the hands of the foreigners. It has appointed an although the Country which has taken in hand the government of the country Islambul, the Su tan, and the Covertiment being in the hands of the enemy oil orders from there are automatically not and void. The nation a rights have been violated. The Turkish nation, thought on m, is determined to maintain its rights as a sovereign independent state."

A asi as the month of May , 920 was drawing to its close the Allies published the terms of peace which they were willing to make with Mehmet IV A small and helpless. Ottoman Empire was to be entirely under the supervision of the Allied powers, all the Arab provinces were to become Mandated Termiones, the whole of Eastern Anaiona was to be added to the state of Armenia around Izmir was to be a large Greek district, Cicha was to go to the French, the Ottoman capital itse flwas to be an international centre under the control of Britain. France and Italy Only the immediate hinterland of Istanbul was to remain of the

otton extensive "Turkey in Europe"

The terms of wide-y accepted would have been the death sentence not only of the Ottoman Empire but of what was now correctly described as Turkey. By entertaining the very idea of signing a treaty based on such terms, the Ottoman Government at Islambul was branded by the patriots as a pupper government of traviors and dotards, and almost the entire Turkesh nation accepted the Turkish government at Ankara.

There was no one to enforce the terms of the treaty, in the event of Mehmet signing at On the 21" August 1921, the Greeks ettacked in the mountain country above the Sakarya river some fifty ki ometres west of And are the two valuent people fought almost man to man for fourteen days under the huming have of the sun, the Greeks attacking with reckless abandon, the Tarks hanging grim you the heights. Mustafa Kama, now their Commander-th-Chief By the 3" of September the colors a moment had come the Greeks were at the end of their strength. On the 12" they crossed the habitary and began to retire steadily but there was no question of the Farks, immediately to low and up their advantage. It was not till the end of August. 922 that Massafa Kama, was oble to sound bis turnous battle-call. "Spidiers, Your goal to the Mediterraneus, Forward."

Six lays inter the advance guard of Tarkish National forces drew within night of the Modiferranean. There lay latter crowdest, and overflowing with refugees. There were ships for the Orcek soldiers but none for the Orcek and Armenian population, craved with fear. In the harhour towered the A field hartleships, powerless to do anothing except to take away as many refugees on board as possible. The Greeks alone were at war with the lines. Turks,

A long line of decorated cars entered limit on the 0° of September 1922 on the enter side in except of cavaley to the leading car was Mustafa Kama. Commander-in-Clines of the Free-Ericsh Forces and "Saviour of Tarkey." Three days after the change of government for broke out in several parts of the city at once and the greater part of izour was reduced to askes.

Mustafa Kamai now real red that he must at last persuade the Ankara Government to make an end of the pupper show in the old capital. He proposed that the Su tanate should be about shed. The Grand Turkish National Assembly gave the vertical.

"By the Linammon's Vote of the Grand National Assembly of Turkey, the Sultanate is abolished."

On the 4° of hovember 922 Riffat carried out a coup d'état at Istanbul. On the following day the Ottuman cabinet resigned office and was not repinced.

For a few days Meltimet stood his ground—the ruler of a palace and a private park. He felt he could trust no one but an old conductor of the royal orchestra, whom at last he sent to Sir Charles Harrington to crove British protection for "the Emperor of powerfu. Emperors, Refuge of Sovereigns, Distributor of Crowns to the Kangs of the Earth, Master of Europe,

Asia and Africa, High King of the Two Yeas

It was the "7" of November 1977. A Bot shimator arribu ance drew up a la side-door of the palace where Mehmet was starting. Some baggage was brought out if he palace and placed in the car. An elderly man followed. A fill the others look the old gent office as he entered the vehicle. The distributed and the ambit under drove away. The last of the Sulfans.

In his way to explicitly a start of the Ottoman Sulfans was now in the seat. I power at Ankata. The will of the Turk shipeople expressed hrough a cader who was ats. It. In a results I the both fix allocation demonstrations.

It was the end of an age timely. "State there is "I the state the Office as a special was wight ped from the state of basic of A saidte of the field and the fact ship Republic and Manage Kartan as the Provident and captures and formulas the Prime Minister.

The Great Reformer

Un asserting priver May a short a visit it was to choose be respice. We was a giga be task terislate educe in was ordered to other times as in here we're was problems to each tempores and a raina in the languages and it

As no was retermined to be used to see a More a kineal declare, he adscript to be about the country to femous the heart have a marked period on section.

The work repeated to went back to accome Norwer Model to the accome to tested period on be a temporated to as one of the fall and a contract of the work of the accome to the accome t

Check task that it complete no the land of the was arecle nor a streen our decisions first because emicated speech under the One can tempt to use been a next of decision for the person and second be as the real rest for a short of mindes. I notices and flowers phrases were only tipiace in the product and have string to see the real rest for the person as a second to substitute for the person of the language by substituting genome larks, where it diose of Arabic and Person or the language by substituting genome larks, where it diose of Arabic and Person origin.

which mean nothing to be new dots to the power of many powers and the was used to the many became flavor there a late a some hopeour of many power is glavore.

Notessires humanary was the about or in with the narring, head-dress called he.

First The Field was moreon Greek, both had a ment of easier about models with florish to When the wearing or hats was made computed there were bare a enough a go round, so that the houses of the foreigners were rapsocked and men even went about in Paris models. It

was reported from Izmir that in a village near by the peasants anable to obtain bowlers or caps, discovered in the clusted shop of a departed Armenian haberdasher a stock of adies summer hats, and setzing the entire selection wore them, ribbons, feathers and all.

Finally to complete this account of Kamal's reforms, we must ment on that which was most sinking, namely the aboution of the ser. As early as 1923 he had addressed the people of western Anatona on the subject of women a rights. 'Our namen has decided to be strong,' he had said, and our absolute need today is the higher education of women. They shall be instructed in every field of science and receive the same degrees as men." Mustafa Kama prepared the country for the change by a tour of the towns and villages during which he addressed himse if principally to the menfold.

No ess great was the economic advance. In 19.9, there was only one in way a Turkey, and judged by modern standards no made at al. Mustafa Kama, mangurated great once opinion and construct at schemes both for radicals and material fig. 1919, there were 150 accomes to furney in 1933, 2008, while the larkish his essent Plati, mangutated in 1934, encounage them a motor in so I further. The banking system was organized and the limits public debt. The account of Saltanate by the new Republic was realized a mester that its formers see A other was achieved as should interchemalism.

The changes of a hearthes of Turk shift of the power superidings it was the number age attornous at the time that Mustalla Samual of to work the ment a unid purifical edge opinion. I are masses of Turkey was on a conjunct had at the period obesteen that open it is in the amount of accordance that Turkey have now transport of the years be road which the people of western the area of the people of the survey of the people and the same raining of the recovery cas been the work of Mustafa Kamal.

NOTES

Words Explained:

democracy named with representative form of government is overnment of

the people by the people for the people

collaborate do work with one another a superast.

armistice agreement in was to be a stop to righting for a one

supersede take, put mother in the place of

remnants small remaining quantity or piece

obstruct get in the way of, oppose

disband . break up, disperse

encounters · meeting in conflict

consternation great surprise, fear

demor : make a little protest

pverrule: make decision of no effect by use of higher authority

Intercept: get person stopped on his way

Infuriate: make very angry

vague uncertain, having no direction

rtagger : move in an uncertain way

dumps : store of guns, etc. near fighting-, ne

peremptory: orders given sharply and with decision

rubtlety: cleverness

deterioration: becoming worse

systemate: go sway from a piace-specially by military

nult and void : of no effect

mandate; control given to another specially by the League of Nations over

nations not ready for self-government

hinterland: saland part of a country

brand: give a bad name to

datards: oid men becoming weak-minded

foolhardy: ever ready for danger

Join haue with: to take opposite view of a question

rackless of danger about

crazed: rendered instance glonning: evening twilight

hobbling: moving up and down

purge. purify

puppet thow; persons whose acts are controlled by another

abolish gus an end to verdict : decision

unnalmous. all of the same opinson

roup d' etat sudden move or sei to get power by violent means

stood his ground: refused to yield, opposed firmly

crave: bog

gigantic . of very large size

Modern Printe and Berges

tenient kind, not hard

elaborate worked to original tera complex in structure

ransack search thoroughly

halterdasher trader in small dress goods

veil pardah

tightly not given, nor notion a osely fastened or fining

Inaugurated produced, instated

stupendous amazing by size or degree

truchorning setting free

ANSWER THESE QUESTIONS

- I what was he as ode the furnish a criment towards the Alles after word Ward?
- 2 way was Shastafa Karting son Ampte 1
 - Who was thereas, on a the first apparatus to mention of he discs to partition the Ottoman Empire?
- 4 Write a Total of Manager and a call Analogs
- 5. Why ad Mehme, in or Massa a harry to see misse instantinop of
- What was Mustafa Kamal's reply?
- * I have and Alexander or to age of the analytical ?
- Why did his plan fus??
- 9 What work hy only To odn To key by by Vines
- I to can account hit of reck lack and a dereat-

Countdoor of he departure the him, from Islanbul

- 2 Describe the reforms in reduced by Massafa Kamal with reference of
 - (a) the position of women.
 - (a) removal of illiteracy.
 - (n1) change in dresses,
 - (19) adoption of the Roman script and
 - die neusenal and economia de ejopment
- Sub- up in a tew seniences the work of Musicia kamaras a great nation-builder.



A DIALOGUE

Usman Navend

Force of the Soutem in the ends are setting in the codes are

Farmet Oh, my goodness Another nesden, while abuse this week

Saleem: Caking the newspaper from Foreson Could reavents. Who has happened a our city?

both the students are saving percise success on the season teach enters the tibrary and happened to it the same table will be both. There we writing

Teacher: Assume to A arknow (Both he students say Williams in Spring Sir Both of you seem quite dejected beautrything all got

Farmal, hands ever the newspaper to the a to her arrors in no be a man in .

Teacher: Child sec. This is not the place of Jesusys come of thy two limits and note the part of war.

We will discuss the matter there.

The teacher's risem, where the teacher and halfette washing to very teach

Teacher toddlessing them We white a abuse is aking place to a circumstrate and anomalous

Faritagis Sir kind vicilias indeas about the menace it by tables.

Teacher Well child abuse means mattered at a cold by a concept year unto four categories neglect embracion about places who is in a concept year.

Achild may be subjected in one of more form a now. The constitution is the fatte you the common wor to an assistant as any. The abuser may be someone known to the classed or a stranger and can be an accompanied and the classed of an accompanied of the classes.

Saleem. 5 r recent traged neidents aced by children, eading it mass protest are very grave examples of child abuse.

Teacher: Saleem, you are quite right.

Saleem Sir such no denis of the diabuse are very magn. How can we overcome them?

Teacher: Well, child protection is soon a ways evoke a passional epublic outers. At the same time, child protection is a complex and the indimensional concept. Flowever every the d and young person have the right to grow up in a sate and supportive

farmly and to have apportunities that assist them to reach their fit I potentia. One of the ways this can be actitized, is through supporting the families to provide for the physical social and emotional needs of children and young people.

Furasut: Sir but one fan' ty sas em is not as strong in our country as it used to be in the past.

Saleem. Sir in such a mations what are other factors that can be helpful in protecting a child from abuse?

Teacher: All religions, as well as the Constitution of our country can play an important role in this regard.

Salcem: Can you kindly explain further, Sur'l

Teacher: We to that water about the dhood and Muss ms regard to lider as gifts and a spars from Aliah. Therefore, it pays particular attention to their gifts of children and to the proper manner of the single them so that they can be equipped to face the difficulties of life.

Farotat: Sit what exactly are the basic right collabilities in a unit

Teacher: They have the right to be few clothed and protected any they reach adulthood. The child has the right to good education and a stable environment.

Samem Is our government also responsible for chaid safety

Teacher: Yes as I have pointed out earlier the convents on a Pak sian, under Article 25 guarantees the profession of the

Farmal Hasine government accuses practical stensors are sufery of children's

Teacher: A china Protection and We fare is stone has also been set up by the Punjab Government Moreover Pau want in 1990 not ned he ci. Resolution regarding the rights of otherwise. A report has a be sent to the line this regard after every five years.

Saleem: Six as we observe in media as well as in our everyday life that a lot of children around the world suffer dails from violence expropation, and abuse. How can they be treated in such an inhuman way and what is happening in our world?

Teacher' Suicem, do you know that some of the greatest threats to child safety are to children using an extreme poverty? The most predictable result is malnutrition that led to stanting in our new generation.

Saleem: Ohilsee

Forasat: Sur, what are the other threats?

Teacher: Lack of access to quality education is another threat to child safety

Saleem Sir, how can we counter this threat?

Teacher: improving education decreases both the powerty and the child mortal by rates of a country. Natern De Cross the famous American cass of an activity and feminist of 20° century said."

Where girls are educated the economy and standards of living rise."

Farosat: Sir armed conflicts are taking place in many parts of our world especially in Mus in countries. People are also magnitude from such areas. Are there any threats to the children is ing in such areas."

Teacher Well, barasat you have pointed out towards a lery important aspect of the whole maker. Children are also importing that such areas, Retriged and migrate children face specific issues. They will When her mind it suffers a lines often as they seek associate they are expensed to potentially disapping. Many queb children become such as, suddiers and drug trafficients. So ingeriously protection policies are crucially fightings as children and crop trafficients.

Teacher Harasat, alonyon know that another thread owards chief with a found to areas of armed conflict?

Furnish: Sit, can you tell us about it?

Teacher. There are several a meeting to publisher who have acase was comes, however meeting arese due to many while constantes (eschage are explosed a weapon's asternal versions were in makess to safe places for changers and their tarmines. The sense are gift on the tark groups either forces to escape poverty optend here given safe a tidy revenge.

Saleeni Sir how can see spew through studions"

Teacher: We all changes by starting disarmamen, and demining processes.

Moreover International Organizations like INCEF and Near pay the ritlet by working a release children from a med groups and he pilitem return himmer, will be interesting or know that many or the threat or of disafety are inseparably united, which may be the key to solve these doubting issues.

Farasat: Sir but these threats are growing

Teacher: We .. Farayat, you are right. But there is hope. The first step to resolve these

prime is going kind out on at them Individuals should share this national with increased of a destablished threats a chaid safety. Through only gheer treatment off in this passible to reate a world in which children only one is to as a fact of a national of the same of

Saleent Sir who are the roles in purents reactions and media under such circumstances?

Teacher Essessing on whom a has a minute play in this regard Parents should ge their charges at a substant hospital to the sone derivative conservation for its part to the sone of the substant and the sone of t

Furnish S seems to the protect of the lifter ghts'

Tendelice A a contract of a state agent an entire continue to indicate

Forestel. What else can be done in this regard, Sir?

Teacher to the season of the s

Formset Standisconnection of the standisconnec

Feacher: Fland the Color All Markon All Markon States and mental beauth both are important.

Suleem Sar how can we ensure child beauth

Teacher A care restaurble as in the ancies diet suespane sho der immunization, and a near region of their model model a orthorphysical health

Faresat: What about a child's mental health. Su?

Teacher to be country or this remark that a time's supports a child by providing

enconditional love apportunity to play with other children, safe and sound surroundings, appropriate guidance and instructive discipline. Moreover family should norture a child's confidence and seri-esteem. The availability of encouraging teachers and supportive caretakers should also be ensured for a child's protection.

We is both of you have asked so many questions about child abuse and how to protect it. But you, perhaps, have forgotten to ment on the role of social media in this regard.

Safeem and Farasat both raise their hands must astonishment

Oh, sorry Six we ready forgot to tack about social media

Farmet Sir, as you are aware sexual media is very active nowadays. Recently, a wave of child abuse has arisen. People are using social media for expressing the riviews about these tragic incidents. What is your view about the role of social media and its influence on children's lives with reference to child abuse and protection.

Teacher: Social media is quick viewelsing in from if our eves and a scalmost impossible to reject and hide from this new form of media.

Salcem. Our whose class is already extensively away six of media. Alm at a I the classmates are connected with one another on havebook etc.

Teacher: Certainly social media is an important part of socialization with a presigning of its now also used for the marketing and medication of people so had they can become a part of a larger community. Social media is undersubly changing the way one community cates and how one finds and shares information.

Farmat Sir both of us use Twitter and Facebook It is very interesting and has become a nort of hobby for us

Teacher: With these advances in technology, one can share things about onese, f and the world

Farasat: Sir, we have made a lot of friends through Facebook and prior to social media we had to communicate and share personally with our friends

Teacher: So, you will be well aware that these social media sites offer ado escents new ways to approach communication and entertainment and the long term effects are still anknown. Therefore, purents should be more aware of this new media and what it offers, both good and bad, for our children.

Saleem: Str. you have referred to the long term effects of social media but what urgenity

required is to find out the impact of social media on a child's afe with reference to child abuse. This is the need of the hour keeping in mind the recent tragic incidents of child abuse.

Farasat* Sin media is regularly reporting moidents of child abuse. Social media, for its part is extensively used by its users for sharing their views.

Teacher: It should be known that social media can affect the mental health of teens. Those teens who use social media tend to be more antisocial and aggressive

Saleem: This is an eye opener for us.

Teacher: You must also be alest about paedoph ses who use the internet to ture young people.

FARMENT: Sir. what is the rote of parents to such a situation?

Teacher: Parents can use technology that blocks access to bad content on the internet but must be aware that this technology does not replace their supervision or guidance.

Salcent Sir what e se can they do to protect their children?

Teacher: Whee parents will searn how to protect their children by immersing dismessives in the media and taking advice from many resources simed at protecting children, while a lowing them to reap the rich benefits in a safe environment.

Saleem: Sir, media is also reporting increasing incidents of juvenile delinquency along with those of child abuse.

Farasat. Sir, what has gone wrong with our society? Where are our traditions? Has our family system broken?

Teacher: We', you should know that committing crimes by those people who have not reached adulthood or the age of maturity. Is considered juvenile delinquency

Saleem: Sir, what are the main causes of , avenue delinquency?

Teacher: Poverty, filteracy, family issues such as broken homes through abandonment or divorce, outside influences in the forms of drug use, hardship of physical or mental disability faced by a teen, peer pressure, influences and the negative role of mass media and technology due to the exposure of teens to everything through social media.

Farmat: Sir which one of them is the main cause?

Teacher: Poverty Actually it is the poverty which drives them into criminal acts for survive. Most of our youth commit crimes due to poverty



Farasat: Sir, is there any other cause?

Teacher: Juveniles detention in jail with adult criminals is another cause.

Saleem: Sir, how can the situation be changed in favour of juvenile delinquents"

Teacher: Juveniles should not be tried with criminals because juveniles are immature and

their decision making capability is not fully developed. Their imprisonment with

adults is the cause of a bigger risk to society.

Faragat: Sir, is there any treatment for the victim of child abuse?

Teacher: Yes, there is treatment such as counselling and psychotherapies for such victims.

The most important is emotional support and caring behavior from the family. It should never blame the child for this type of mishap. A psychologist can perform very well in this regard otherwise it can create a lifelong effect on the abused child. It can hinder his/her academic performance as well as social skills, for example, academic achievement, self-esteem and interpersonal relationships and its impact can last for the whole life. After proper treatment, the victim can perform very well in every field of life and live a happy and healthy life. The treatment for such kind of trauma may be received from the hospitals.

Farasat and Saleem: Sir, thanks a lot for this valuable information.

Teacher: I hope that both of you have fully grasped all the aspects of this sensitive and vital issue. You must keep in mind a hadith of Hazrat Muhammad (50) who said, "He is not one of us who does not have mercy on our young ones and does not respect our elders".

(Farasat and Saleem say Allah Haftz and leave the teacher's room)

NOTES

Words Explained:

pensive: thinking deeply, often of sad or melancholic things

good heavens: used informally to express surprise, anger

explosive: a substance that can explode

naylunt: any refuge

migration: moving from one place to another

self-esteem: self-respect

immersing: absorbing deeply

kidnapplag: taking somebody away or detaining illegally

mainutrition; insdequate nourishment

bruises: injuries (to body tissue) without breaking the skin but make a mark

on st

adult: grown-up

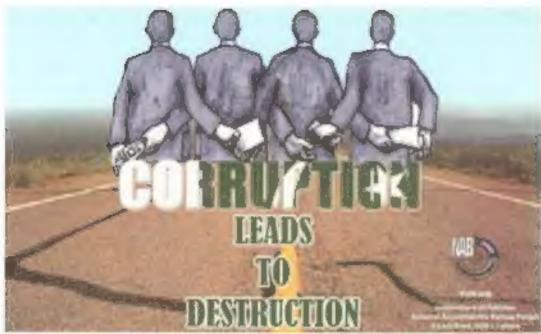
paedophiles: a person sexually arracted to children

Juvenile: childish or related to young people

delinquency: failure to perform one's duty

ANSWER THESE QUESTIONS

- What type of news was there in the newspaper
- Why did Farasat and Saleem become sad after reading the news?
- 3. Describe the four categories of the child abuse.
- 4. How can we overcome child abuse?
- 5. What are the basic rights of children in Islam?
- 6. What are the threats to the children living in war-zones of the world?
- 7. How can parents, teachers and media perform their duties to eliminate this evil of child abuse from the society?





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